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THE MORMON LAND SYSTEM
A STUDY OF THE SETTLEMENT AND UTILIZATION OF LAND UNDER THE DIRECTION OF THE MORMON CHURCH

by

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PREFACE

A new period in the history of our public lands began with the assumption on the part of the Federal government of the task of reclaiming arid lands by irrigation. A quarter of a century of experience has made it evident that successful settlement of such lands involves economic and social problems of fundamental importance. The nature of these problems and the methods of their solution have been made the subject of special inquiry at the instance of the government and changes designed to relieve settlers on many projects from a pressing burden of debt by extending time of payment and relating the amount of payments to the crop yield have been sanctioned by law. Legislation still advocated by those most familiar with the progress of our reclamation projects would provide for selection of settlers and for both financial and educational aid. Beginning at the middle of the last century and continuing to its close, the Mormon people were engaged in settlement projects that presented many difficulties not dissimilar to those contronted to-day in the working out of our Federal reclamation policy. Though the writer in undertaking a study of the methods followed by the Mormon people in the settlement of lands was prompted rather by historic interest than by any aim to shed light on present-day problems, he will be gratified if he has contributed in any degree to a fuller understanding of procedures that have been and that may be found successful in increasing man's domain in the desert.

As may be observed from an examination of the bibliographic notes, the study, though making use of available secondary sources, has involved the examination of a great mass of manuscript material in the library of the L. D. S. Church Historian. Part of this material is arranged chronologi-

eally in loose-leaf form under the general title of the Journal History; part of it is found as the history of the stakes and wards of the Church. These histories together with uncopied letters and documents in the files of the Historian constitute a mine of information on the daily life of the Mormon people. The lack of an adequate index, however, makes very laborious any attempt to investigate a particular subject. This barrier to the use of the material is gradually being corrected by the preparation of a card index, which up to date is limited mainly to genealogical and biographical items.

A word should be said about the use of terms. The enemies of the Church of Jesus Christ of Latter-day Saints first applied to its adherents, in derision of course, the term Mormons. The members of the Church themselves preferred to abbreviate their lengthy title to its most expressive term, Saints. Time has effaced the sanctity of the latter as completely as it has removed the opprobrium of the former substantive, and in Mormon literature, as well as in everyday speech, the words are used interchangeably. To avoid monotonous repetition, the author has used these and other expressions common in writings of and about the Mormons. In so doing, he disclaims any intent to ascribe to them any other than merely descriptive values.

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CHAPTER I

THE MORMON LAND SYSTEM

In their occupancy of land in the arid West, the Mormon people developed a system of intensive utilization in striking contrast to the ordinary American practice. This system was the expression of a fairly consistent policy formulated to promote the social and religious aims of the Church. A study of the system should prove both interesting and instructive; interesting because it has to do with the activities of a people whose religious ideas and practices have provoked a great deal of controversial discussion, and instructive because of its bearing on the history and methods of arid land settlement. Careful historians and observers agree in characterizing the system as the most successful example of directed colonization in American history.(1) This study is primarily concerned with the land policy of the Mormon Church as it expressed itself in the settlement of the West. It is commonly supposed that Brigham Young was almost wholly, if not alone, responsible for whatever material success the Mormon people achieved in conquering the desert. This erroneous opinion has persisted because of too little attention to the economic aspects of Mormon history in the pre-Utah period. Investigation reveals a striking consistency in the land policy of the Church from its earliest years to the close of the period of western colonization. Accordingly, to understand correctly the activities of the Church in Utah and the West, it is essential

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(1) Coman, Katherine, Economic Beginnings of the Far West, vol. ii, p. 183. Beard, Charles A. and Mary R., The Rise of American Civilization, vol. i, p. 624.

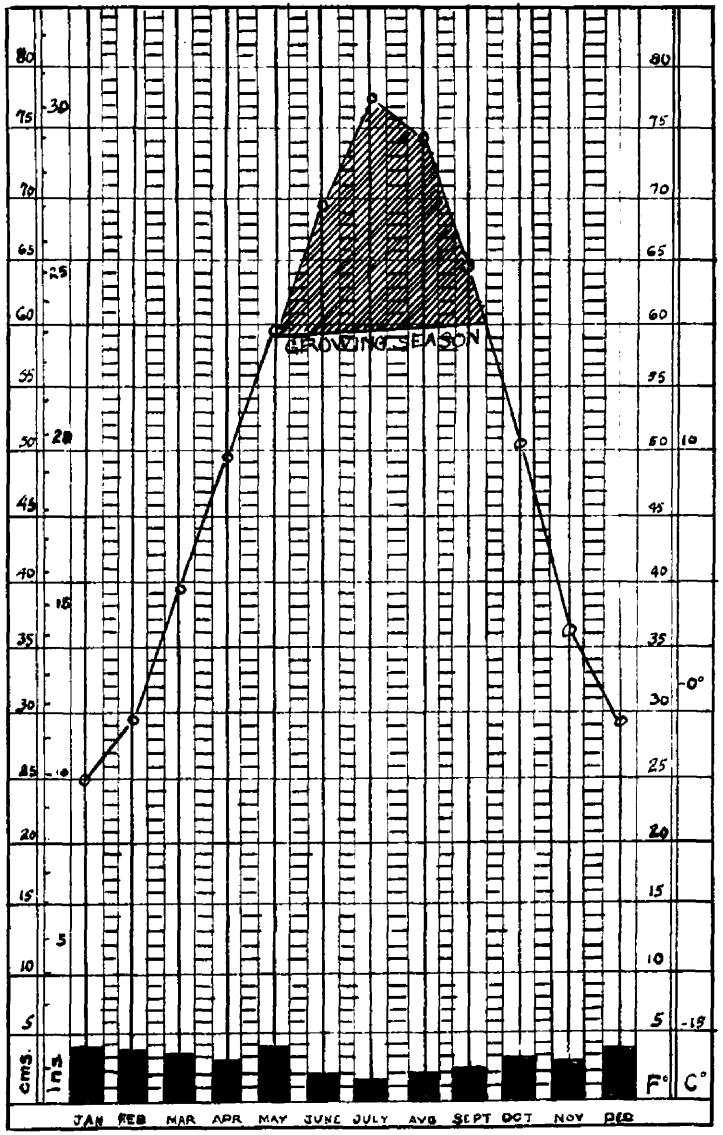

FIGURE 1. CORINNE, UTAH

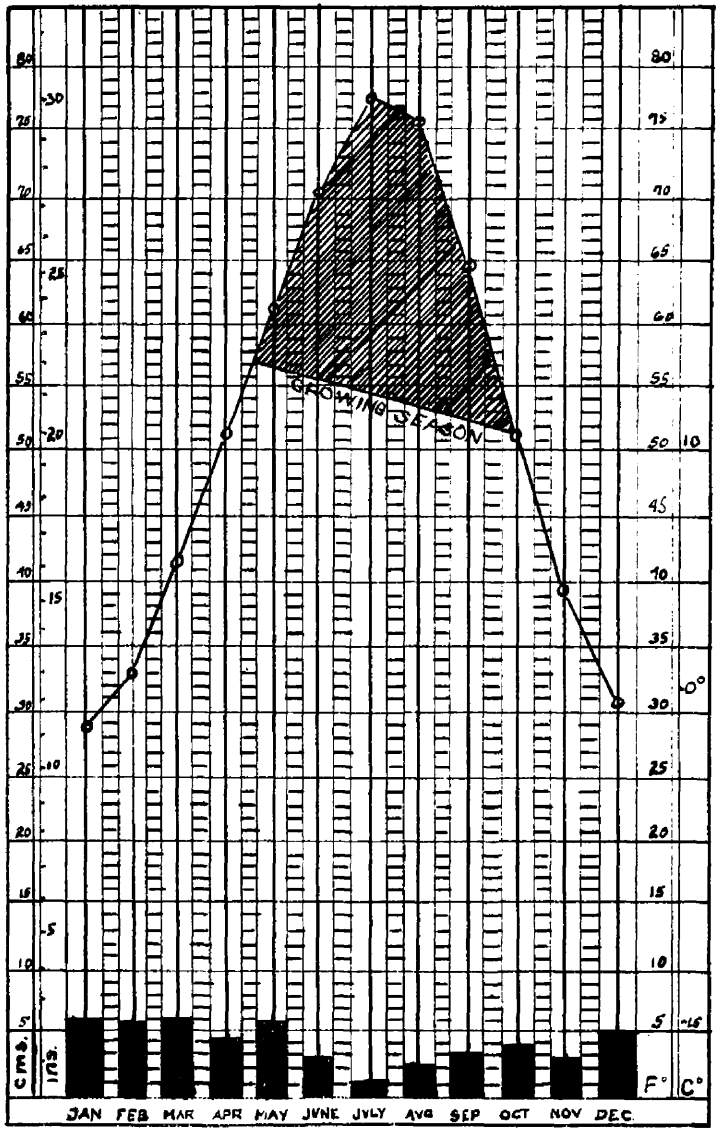

FIGURE 2. OGDEN, UTAH

RAINFALL AND TEMPERATURE CHARTS

to view them against the background of earlier experience; we shall therefore survey the activities of the Mormon people in their pre-Utah days to such extent as may seem desirable for the illumination of the later period.

It will become apparent as the discussion proceeds that the Mormon land system and the policy of which it is the expression developed from experiences in the Mississippi valley modified by the struggle to conquer arid desert lands in the West. In the latter region the rainfall is under fifteen inches. In southwestern Arizona it is less than five inches. The mean annual rainfall for Utah is eleven inches. Two-thirds of the precipitation occurs during the winter months. During the growing season vegetation quickly dies unless artificially watered. Trees never grow naturally in the valley except along stream courses. Only drought-resistant native grasses and shrubs--sagebrush, greasewood, rabbit brush--can survive a western summer. Figures 1 and 2, adapted from White, indicate diagrammatically salient facts regarding rainfall, temperature, and prevailing wind direction, for two localities in the Great Basin. The mean annual precipitation at Ogden is 18.92 inches. It will be observed that the fall is especially light during the growing season.

Dividing the United States into an eastern three-fifths and a western two-fifths, Professor Brigham draws the following contrast:

> "Very little land in the East under reasonable care could fail to lend itself to tillage, pasturage, or forest. Vast areas in the West are deserts of rock, deserts of aridity, lands subject to frosty nights in midsummer, and other lands bearing pasturage so thin that acres are needed to maintain a single unit of the cattle herd. Eastern agriculture shows broad and almost unbroken belts of staple cultures running east and west following each other from Canada to the Gulf of Mexico. Western tillage is vastly important, and often highly intensive, but is found in patches, where nature or man is able to bring water upon the fields." (1)

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(1) Brigham, The United States of America, page 108.

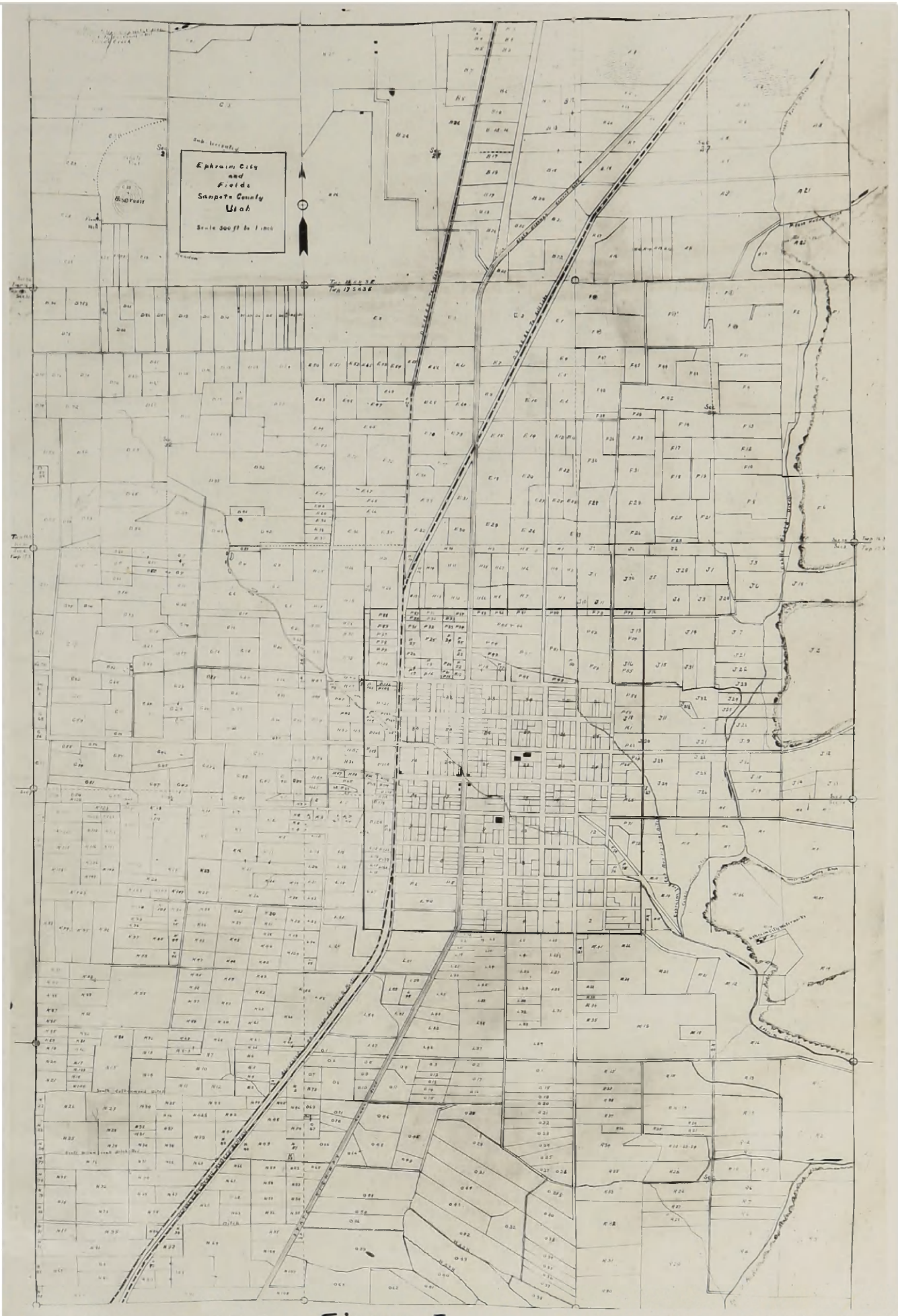
Ephraim City
and
Fields
Sanpete County
Utah
Scale 300 ft to 1 inch

Figure 3

Spreading out from Salt Lake City as a center, the Mormons, in the course of fifty years, and for the most part, within a much shorter period, established over 300 settlements, in seven western states (1) and in Mexico and Canada. Within the territory thus brought into use, there resides today a Mormon population of 430,000. (2)

In the establishment of all their settlements the Mormons followed a uniform pattern peculiar to themselves. In contrast to the process of land appropriation by individuals which has characterized from the beginning the settlement of the United States, the Mormon system, similar in some respects to that of New England, followed the farm-village type. The farmers lived, as many of them still do, not on the farms, but in villages laid out in blocks of perfect squares, each family on its own garden lot of from one-half to one and a quarter acres, whence the workers went back and forth daily to their small irrigated farms surrounding the villages. A plot of a Mormon village and its field system is shown in Figure 3.

The following quotation from the pen of an English traveler in 1882 with slight modification could be made to describe almost any Mormon village.

> "As a settlement, Manti is pretty, well-ordered and prosperous. The universal vice of unbridged water-courses disfigures its roads just as it does those of every other place (Salt Lake City itself not excepted), and the irregularity in the order of occupation of lots gives it the same scattered appearance that many other settlements have. But the abundance of trees, the width of the streets, the perpetual presence of running water, the frequency and size of the orchards, and the general appearance of simple, rustic comfort impart to Manti all the characteristic charm of the Mormon settlements. The orthodox grist and sawmills, essential adjuncts of every outlying hamlet, find their usual

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(1) Colonies were founded in Utah, Idaho, Arizona, Nevada, New Mexico, Wyoming, Colorado; San Bernardino, California, was colonized by Mormons and later abandoned.
(2) Information supplied by the Presiding Bishop of the Church.

> place in the local economy; but to me the most interesting corner was the quaint tithing-house, a Dutch barn kind of place, still surrounded by the high stone stockade which was built for the protection of the settlers during the Indian troubles fifteen years ago. Inside the tithing-house were two great bins half filled with wheat and oats, and a few bundles of wool." (1)

The land surrounding the village is intensively used. Census data show an increase in the average size of Utah farms from 30 acres in 1870 to 126 acres in 1890. The area of improved land in farms increased from 24 acres in 1870 to 52 acres in 1890. The change represents in part a departure from Mormon practice, but is chiefly to be explained by the taking up of larger areas of non-irrigable land for "dry" farming and stock raising. The intensive nature of Mormon tillage is made apparent by a comparison of the average acreage of improved lands in farms with that of the United States as a whole. We take the data for 1880 and earlier because the population in Utah then was preponderantly Mormon.

Average acreage of farms (2) (3)
in Utah and in the United States

	Utah		United States	
	All land	Improved land	All land	Improved land
1880	69.4	44.0	133.7	71.0
1870	30.2	24.2	153.3	71.0
1860	24.7	21.2	199.2	79.8
1850	50.6	17.6	202.6	78.0

The comparatively large acreage of the average Utah farm in 1850 is due to the counting of common enclosures, jointly occupied by many cultivators, as single farms. The high proportion of improved land in later decades should be noted.

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(1) Robinson, Phil, Sinners and Saints, 1883, pp. 165-6.
(2) U. S. Census 1910, vol. v, p. 96.
(3) U. S. Census 1910, vol. v, p. 91.

The feature of intensivity of cultivation is further brought out in census data for 1889.[1] Nine-tenths of the irrigated acreage in Utah is farmed in areas of 25 acres on the average. States ranking next to Utah in regard to the smallness of irrigated farms are Idaho, where Mormons are an important element in the population, and New Mexico, where strip-farming by Indians and Mexicans accounts for the small average area per irrigator.[2]

Mormons own the land they till. Holding of land for speculation was, as we shall have occasion to emphasize, strongly condemned. The proportion of farms operated in 1880 by tenants was under five per cent. For the country as a whole the proportion was twenty-five per cent, and for the Western Division it was fourteen per cent.[3] Of the farms in Utah occupied by owners in 1890, 94.5 per cent were free of mortgage.[4]

Irrigation systems were cooperatively built and are owned by water-users. In 1920, only five per cent of the irrigated acreage in Utah received water from canals commercially owned. The relatively small capacity of Utah canals reflects the conditions under which they were first constructed. The average capacity of 877 main ditches cooperatively owned in Utah in 1920, was 24.5 second feet. Corresponding figures for California, Colorado, and Idaho are 81.7, 82.5, and 77 second feet respectively.[5]

In the typically Mormon farm-village economy pasture and woodland was held in common. The pasture was often enclosed and rights carefully regulated. Herd-ground concessions on open lands were accorded to individuals who charged by the head for herding. To make limited supplies of

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(1) Report on Agriculture by Irrigation, Eleventh Census, 1890.
(2) See complete data in appendix.
(3) Thirteenth Census, 1910, Abstract with Supplement for Utah, p. 599.
(4) Ibid, p. 600
(5) Computed from data from U. S. Census, 1920, vol. vii.

wood accessible, toll privileges were granted to individuals who made roads and regulated cutting.

The controlling principle in the division of lands, water, timber, and grass, was full utilization. As we shall see both need and ability of occupants were taken into consideration. Men of large capacity were often granted large holdings, but they were expected to devote their substance to the promotion of the general good. The system was individualistic, conditioned by altruistic ends. It led to community prosperity. Summarizing the achievement of the Mormons in the Salt Lake region, a recent writer says:

> "The Salt Lake Oasis in wealth, population, and stage of economic and cultural development is the capital of the intermountain country. Originally one of the most barren spots in the western wilderness, this region has become one of the most fruitful in America. With the unkindly soil, the lack of trees, except such as grew here and there in narrow, rock-ribbed gorges, with fuel almost inaccessible at points where habitation was possible; and with no near neighbors,--amid this repellent and inhospitable region, the Mormons made their busy settlements. Within the three score and ten years allotted to a man's life they transformed this barren waste into a verdant island teeming with industry." (1)

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(1) White, The Insular Integrity of Industry in the Salt Lake Oasis Economic Geography, vol. 1, No. 2, p.235.

CHAPTER II

LAND POLICY IN THE PRE-UTAH PERIOD

It was stated in the preceding chapter that the land policy worked out in Utah by Brigham Young and his associates had its roots in earlier Mormon practice. It is the purpose of the present chapter to trace the development of policy in regard to the acquirement and use of land through the early years of Mormon history to discover to what extent later practices were anticipated. In Utah and elsewhere in the West the Mormon people settled principally in farm villages, each family residing on a city garden plot and farming a larger holding beyone the limits of the village. Farms were small--from 25 to 40 acres. There was a good deal of cooperation in fencing and in the distribution of water and in providing community needs. We shall see that, with modifications of practice dictated by environmental differences, the principal characteristics of the system were developed in the pre-Utah period.

Three ideas of the founder of the Church are of fundamental importance in determining land policy. The first to be noted is the notion that the righteous must be segregated. This being so there must be found a place spacious enough to accommodate all who were worthy. The rapid increase in converts to the faith was paralleled by redefinition of the place of gathering. Missouri was indicated as the promised land for the inheritance of the Saints and Independence as the center; but when the Mormons were driven from that vicinity other areas were brought within the limits of Zion, as the land of promise and place of gathering was known, by their designation as

stakes of Zion.[1] The doctrine of gathering was preached with great ardor until very recently. The provision of suitable lands upon which to establish the congregating Saints has thus been a major concern of Church leaders from the inception of the Church until a change of policy was dictated by the diminishing supply of land.

Closely related to the notion of gathering is the second idea of a central city, Zion or the New Jerusalem, whence through his servants, the Lord would direct the work of establishing His kingdom upon the earth. Even before the organization of the Church in the spring of 1830 the Prophet had written of such a city.[2] In July 1831, while visiting Jackson county, Missouri, whither he had gone for the purpose of selecting and dedicating the locality for the gathering of the Saints, Joseph Smith selected the site of Independence as the center place of Zion.[3] Two years later a plat and descriptive notes, of which more will be said below, was prepared by Smith and presented as the plan for the city of Zion. It was the original pattern for Mormon villages and though not realized in Jackson county, because of the expulsion of the Mormons from that vicinity, it is of great importance as the prototype of subsequent efforts.[4]

The third fundamental idea of the Prophet having important significance in determining land policies is that of the elimination of poverty by bringing about approximate economic equality. The underlying principle of the Prophet's communistic scheme was known as consecration and his proposed social system as the United Order. The plan was outlined by the Prophet in

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(1) The Doctrine and Covenants, pp. 56, 62, 73, 89, 172, 185, 202, 209, 219. The Mormon people still designate their major ecclesiastical districts as stakes of Zion; of which there are now one hundred. Collectively the stakes make up Zion.
(2) Book of Mormon, pp. 444, 503, 504;
(3) The Doctrine and Covenants, p. 89.
(4) See below beginning with p. 13.

a series of 'revelations.'[1] Entrance into the order was voluntary; that is, one could be a member of the Church without becoming a member of the order. An applicant for membership in the order deeded all his properties to the Church and received in return an inheritance or stewardship. This stewardship might be a farm, a store or shop, or a ministerial mission. The proceeds of the undertaking, beyond a humble living, were to be turned into the bishop's store-house to be used for the common weal. Inherent in the foundation of the United Order was the principle that one's stewardship should be gauged by one's ability to administer it successfully. The principles underlying the establishment of the order became fundamental elements of Mormon land policy outside that system. Land holdings were based on full utilization. In the settlement of the Salt Lake Valley, as we shall see, the principle was applied quite rigidly. The bearing of such ideas on the amount of land that one person might hold is obvious. While a farmer of unusual ability might be permitted to operate a large farm, the man of ordinary capacity must be content with such acreage as he could work to advantage. As all who desired to enter the order were entitled to stewardships the individual holding could on the average be no larger than the total acreage available divided by the total number of farmer families.

In the early days of the Church while these ideas were taking shape, attempts were being made to realize them in actual settlements. It was a period when communistic experiments were numerous and the Mormons were among those who tried out their plans for social improvement. We are here interested in these undertakings in so far as they pertain to the acquisition and allotment of land. The earliest conversions to the Church were

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(1) Doctrine and Covenants, pp. 62, 82, 185-187.

made in New York and Pennsylvania and these were followed by others over a widening area including several hundred in the vicinity of Kirtland, Ohio, many of whom, the followers of one Alexander Campbell, were practicing communism.

Joseph Smith soon designated the region about Kirtland as a gathering place for the Saints and advised the eastern members to sell or rent their lands and go to Ohio. The members at Kirtland were advised to share their lands with the newcomers and the purchase of other lands was advised. There was no restriction against the holding of land individually, but the ideal of regarding all property as available for common use was stressed and some were called upon to open their farms to settlement. Unfortunately our information is not very specific and it is not easy to determine the extent of the control of the Church leaders over the disposition of lands at that time. It is clear that a colony of Saints from Colesville, New York, settled at Thompson, Ohio, according to the plan of the United Order, upon lands acquired for them by the Church under agreements that were almost immediately revoked by the owners, whereupon the colony was conducted to Jackson county, Missouri, to continue the experiment.(1)(2)

In the latter place some progress was made in establishing the Saints in compact settlements. An agent had been appointed to purchase lands and another, Bishop Partridge, to apportion them in accordance with the principle of consecration. There was an abundance of cheap land available. Government lands were open to entry in half-quarter sections (80 acres) at $1.25 per acre and seminary lands (lands given to the state by the federal government for the foundation of a seminary of learning) at $2.00 an acre and up.

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(1) Doctrine and Covenants, pp. 81-82.
(2) Smith, Essentials of Church History, p. 127.

Eighty acres of seminary lands adjoining independence were divided into lots and their sale by auction authorized at not less than $10.00 for lots of an acre or less, and at not less than $5.00 an acre for larger lots.(1) The poverty of the Church greatly limited its purchases. By January, 1832, the land acquired amounted to less than 1200 acres.(2) This and 'other necessities' had cost according to Bishop Partridge's report, $3,449.90.(3) It is obvious that the cheaper lands mainly were purchased. Besides the lands obtained by the Church, there were undoubtedly many purchases made by individual members. Probably other lands were pre-empted, to be paid for later as the settlers obtained cash. One may get some idea of the extent of the Mormon holdings from the number of houses they built. At the time of the expulsion from Jackson county, two years after the first settlement, 203 houses belonging to Mormons were destroyed by the mob.(4) Many of these were probably on garden lots. If we estimate only 20 acres on the average to each house, the total acreage would equal 4,060. Those who entered the United Order in Jackson county held land under lease from the Bishop of the Church. A copy of a deed of 'consecration' and of the lease from the bishop will be found in Appendix I. The parcel covered by the lease, twenty-seven and one half acres, may be regarded as a typical holding. The experiment encountered the usual difficulties common to all voluntary communistic experiments and, as well, the determined opposition of non-Mormon settlers leading to the early expulsion of the Saints. Designed to relieve the poor, the system broke down largely because the poor came in such great numbers that lands could not be had for them, while the well-to-do did not respond with anticipated liberality.(5)

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(1) Geddes, Joseph A., The United Order, p. 37.
(2) Roberts, B. H., Missouri Persecutions, p. 55.
(3) Journal History, MS. Jan 23, 24, 1832.
(4) Smith, Joseph, History of the Church, (ed. by Roberts) Vol. III, p. 439.
(5) Corrill, John, Brief History of the Church, pp 18-19.

Meanwhile the Kirtland settlement was being pushed. Decision had been made by the Prophet to establish a stake of the Church in Ohio as well as in Missouri. His own headquarters were at Kirtland. In march, 1833, a council of Church leaders was called to select lands. It was found that three desirable farms could be had for $13,100. Agents were appointed to make the purchase.(1) The record is not clear whether all the land was acquired. One of them, known from its owner as the French farm, contained a brick-yard, and as considerable building was in prospect on newly surveyed city lots in Kirtland, this piece of land was especially desirable. Altogether the Mormons must have acquired considerable land in the vicinity, for the Church in Kirtland soon numbered 1500 souls.(2)

It appears that the practice of the United Order in the Kirtland branch had been limited to a few Church leaders.(3) The opposition in Missouri gave impetus to the growth of Kirtland, which became a preferred center for the gathering. Accordingly plans were laid for the establishment of the United order on a more extensive scale in Kirtland. The experiences of Jackson county were repeated. The poor came from branches of the Church everywhere seeking allotments until the leaders at Kirtland were compelled to issue a command that gathering of families to Kirtland cease except to the extent that heads of families first come and make provision for a habitation.(4) Finally due to weaknesses inherent in the system, or as some would say, to human frailties, the system collapsed. Years later in a few settlements in Utah attempts to reestablish the order met with failure.

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(1) Smith, Joseph, History of the Church (ed by Roberts, B. H.) vol. I, p. 355.
(2) Doctrine and Covenants, with historical notes by Hyrum M. Smith, Liverpool, 1919, p. 747.
(3) Doctrine and Covenants, p. 158.
(4) Journal History, MS Dec. 22, 1836.

It was in connection with these communistic schemes that the Prophet and his associates undertook to build the city of Zion--the New Jerusalem. The farm-village plan, one surmises, was the outgrowth of communistic ideals and defensive needs. When the plan for Zion city was sent in June, 1833, by its author, Joseph Smith, to the Church leaders in Missouri, the latter were conducting a losing fight to retain a footing in Jackson county. A settlement such as was proposed by the Prophet, especially if it might attain a population such as he contemplated, could offer a strong front to its enemies. From the social side it offered great possibilities in the promotion of educational and religious interests.

The original plan of Zion city with accompanying specifications has been preserved in the office of the Church Historian. The instructions are in the handwriting of Joseph Smith and cover the space around the plot itself and part of the other side of the document. A reproduction of the side showing the plot is shown opposite p. 14. This document is of such unique importance that it has been several times reprinted but never correctly.(1) The following text has been carefully checked with the original:

> The plot contains one mile square; all the squares in the plot contain ten acres each, being forty rods square. You will observe that the lots are laid off alternately in the squares; in one square running from the south and north to the line through the center of the square; and in the next, the lots run from the

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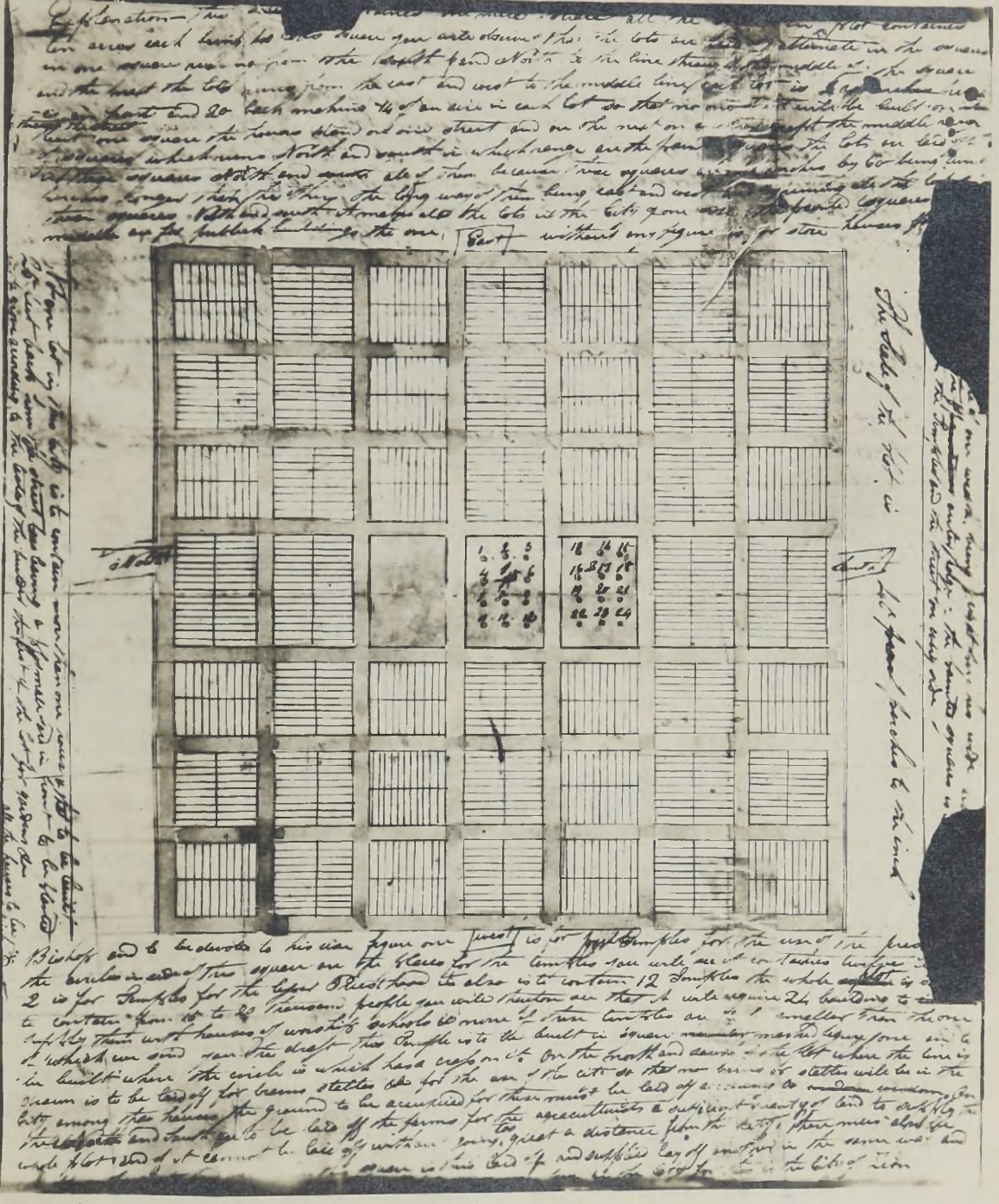
(1) The original errors, consisting of the omission of a few words and slight changes of punctuation, though small in themselves, result in throwing the text into confusion, though the general idea is readily grasped. The errors have been traced to the manuscript History of the Church, Book A2, p. 203 (1833) and have been copied into Times and Seasons, vol. VI (1845) pp. 785-787; Smith, Joseph, History of the Church, (ed. by Roberts, B. H.) vol. I, pp. 357-359; Geddes, The United Order Among the Mormons, pp. 88-89.



Plat of Zion City

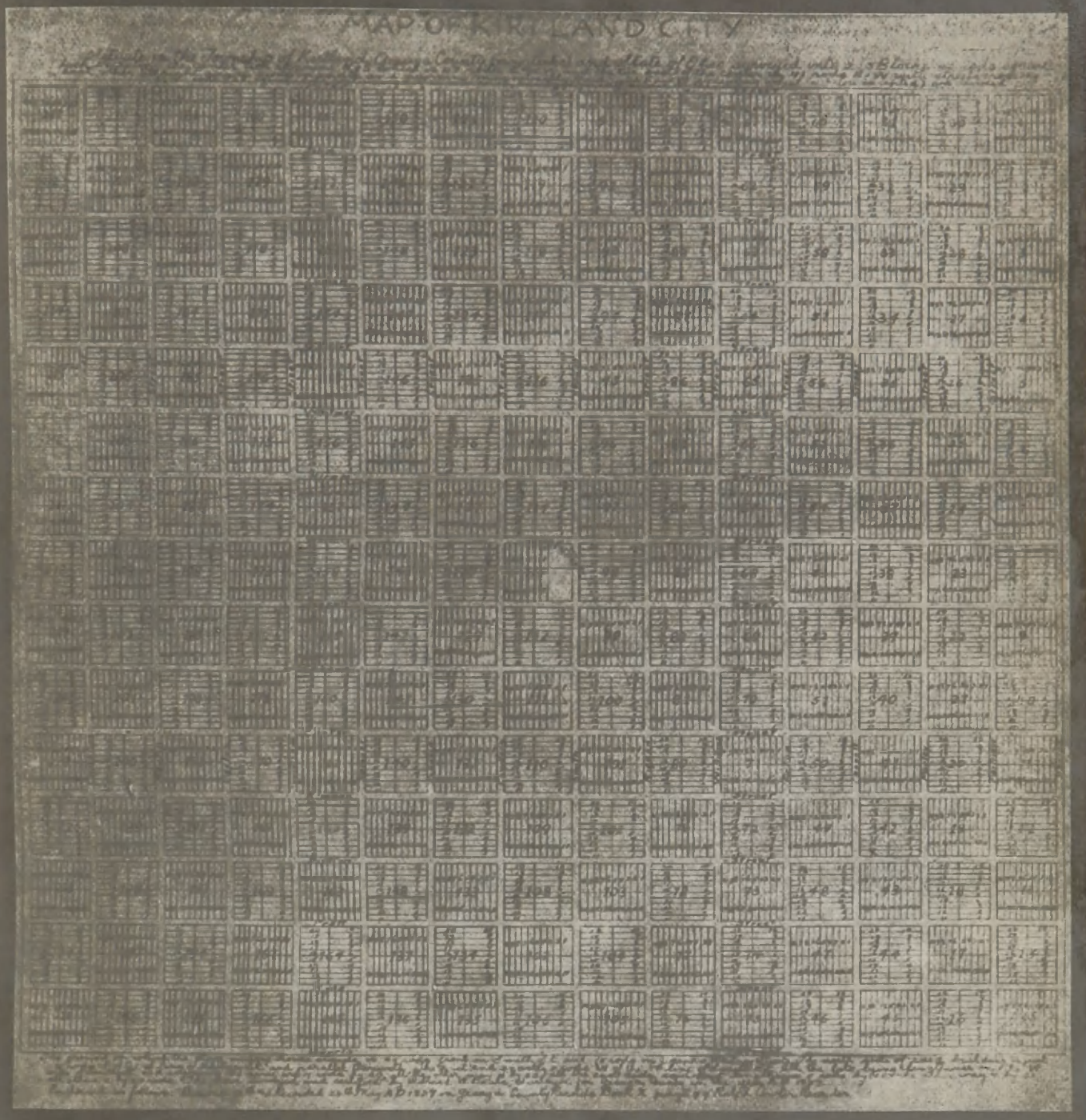
east and west to the center line. Each lot is four perches in front, and twenty back, making one-half of an acre in each lot, so that no one street will be built on entirely through the street; but on one square the houses will stand on one street, and on the next one, another, except the middle range of squares, which runs north and south, in which range are the painted squares. The lots are laid off in these squares north and south, all of them; because these squares are forty perches by sixty, being twenty perches longer than the others, their greatest length being east and west, and by running all the lots of these squares, north and south, it makes all the lots in the city of one size.

The painted squares in the middle are for public buildings. The one without any figures is for storehouses for the Bishop, and to be devoted to his use. Figure one is for temples for the use of the presidency; the circles inside of the square, are the places for the temples. You will see it contains twelve figures. Two is for temples of the lesser Priesthood. It is also to contain twelve temples.

The whole plot is supposed to contain from fifteen to twenty thousand people: you will therefore see that it will require twenty-four buildings to supply them with houses of worship, schools, etc. None of these temples are to be smaller than the one of which we send you a draft. This temple is to be built in the square marked figure 1; and to be built where the circle is which has a cross on it.

On the north and south of the plot where the line is drawn, is to be laid off for barns, stables, etc., for the use of the city; so that no barns or stables will be in the city among the houses; the ground to be occupied for these, must be laid off according to wisdom. On the north and south are to be laid off the farms for the agriculturist, a sufficient quantity of land to supply the whole plot; and if it cannot be laid off without going too great a distance from the city, there must also be some laid off on the east and west.

When this square is thus laid off and supplied, lay off another in the same way, and so fill up the world in these last days; and let every man live in the city for this is the city of Zion. All the streets are one width, being eight perches wide. Also the space round the outer edge of the painted squares, is to be eight perches between the temples and the street on every side. No one lot, in this city, is to contain more than one house, and that to be built twenty-five feet back from the street, leaving a small yard in front, to be planted in a grove according to the taste of the builder; the rest of the lot for gardens; all the houses are to be built of brick and stone. The scale of the plot is forty perches to the inch.



PLAT OF KIRTLAND, OHIO
Recorded in 1837.

The author of the plan was not attempting to be accurate in saying that the plot contains a square mile. It is easily calculated from the plat that the correct dimensions are 344 rods north and south and 364 rods east and west, if we include the outside street. The 40 x 60 blocks are drawn with 32 lots each, obviously unintentional, since each lot is to contain one-half acre. One wonders how fifteen or twenty thousand people are to reside on the square with the limitation of one house to a lot. If all public buildings and store houses are confined to the reserved squares there are provided 960 lots. There would be that many residences, no more. Five to a family and one family to a residence would give a population of 4800. This degree of concentration must be more than trebled to equal the minimum of 15000 specified by the Prophet.

The plat of Kirtland, Ohio, was presented to the Saints at a general meeting,[1] April 6, 1837, and filed for record later in the month. As there existed an earlier subdivision into lots[2] the later plan represents an enlargement. Four years had elapsed since Zion city was platted. Joseph Smith had evidently been influenced by the contagious optimism of a period of inflation. Kirtland is Zion city on a somewhat larger scale. (See plat opposite page). Zion had 960 lots, Kirtland 4500. The dimensions of blocks and lots, and the general arrangement are the same. The central plaza of Zion does not appear, though the temple occupies a central location; and the streets are reduced to a width of four rods. There is evidence of a greater economy in the utilization of land.[3] The inflated values of real estate purchased with notes of the Kirtland Safety Society Bank no

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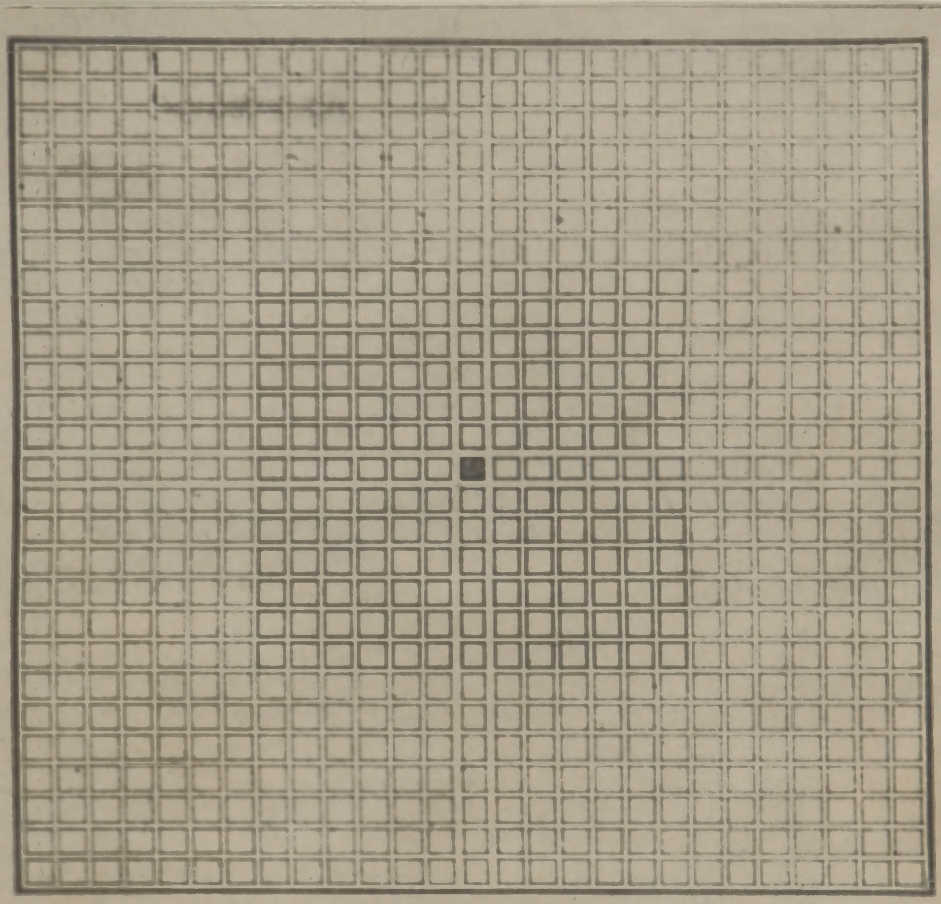
(1) Woodruff, Wilford, Journal, MS., April 6, 1837.
(2) Doctrine and Covenants, Sect. 104.
(3) Kennedy, Early Days of Mormonism, p. 155; Randall and Ryan, History of Ohio, vol. iii, p. 418.



PLAT OF FAR WEST 1836

doubt had weight in the decision to limit the width of streets to half that of the streets of Zion. The panic of 1837 and the failure of the Bank brought the project to an end.

That Kirtland was also a city on paper rather than a fact accomplished is evident from a description written in July, 1836. "Instead of a regular town, village, or city, laid out and ornamented with rows of fruit or forest trees, selected for their beauty and luxuriance of their foliage or shade, or for their utility in furnishing articles of food, the eye rests upon rude dwellings scattered in all directions from the river to the Lord's House and south for the distance of a mile or more."(1)

The village of Far West in Caldwell county, Missouri, represented a second attempt to establish a Mormon center in that state. Driven from Jackson county, the Saints found temporary homes in Clay county, where they were received kindly by the inhabitants, with the expectation that they should leave as soon as they should have their Jackson county lands restored to them. When it became evident that this would never be, Clay county citizens requested the Mormons to move from among them, suggesting a location still uninhabited in the northern part of Ray county. A peaceful exodus occurred in 1836 to the lands suggested, and in December the counties of Caldwell and Davies were created by the legislature. Far West, De Witt and other communities were established. In the year 1838, Joseph Smith, fleeing from Kirtland after the collapse of 1837, joined the Saints at Far West and shortly thereafter approved the region through 'revelation' as a suitable gathering place for the Saints and suggested an enlargement of the town site which had been entered in August, 1838,

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(1) Messenger and Advocate, vol. ii (July, 1836) p. 369.

(See Plat opposite page 16), to occupy four square miles, containing about 2000 acre lots. Only a small number of lots were built upon. The number of houses in the spring of 1838 is given as 150.(1)

The holdings of the Saints in Caldwell and adjoining counties were large, as the following from an official statement shows:

> "They purchased of the Government, or of the citizens, or held by preemption, almost all the lands in the county of Caldwell, and a portion of the lands in Daviess and Carroll. The county of Caldwell was settled almost entirely by 'Mormons,' and 'Mormons' were rapidly filling up the counties of Daviess and Caldwell. When they first commenced settling in those counties, there were but few settlements made there; the lands were wild and uncultivated. In the fall of 1838 large farms had been made, well improved and stocked. Lands had risen in value, and sold for from ten dollars to twenty-five dollars (per acre). The improvement and settlement had been such that it was a common remark that the county of Caldwell would soon be the wealthiest in the state." (2)

When expelled from Missouri, as they finally were in the winter of 1838-9, the saints sought an abiding place in Illinois. A conference at Quincy in February divided on the question of buying lands. With opposition everywhere evident, Bishop Partridge thought that the Saints should scatter and abandon any attempt to form compact communities. This advice if followed would have brought the Church to an end. Several other leaders favored taking advantage of offers of land in extensive tracts at low prices and long credit. Nothing was done until the Prophet, escaping from long confinement in Missouri, rejoined the Saints. He immediately approved the site of Commerce, Illinois, as the new center of Church activity. He re-named the place Nauvoo, signifying, as he declared, 'a beautiful place'. Nevertheless, the prospect was not altogether alluring. Says Joseph Smith

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(1) Roberts, B. H., A Comprehensive History of the Church, vol. i, p. 425.
(2) Smith, Joseph, History of the Church (ed by Roberts, B.H.) vol. [illegible], p. [illegible].

NAUVOO.

Scale 600 ft. to One Inch.

MISSISSIPPI RIVER

P. Kimball

C. Hrymer.

James Moffitt 160 ac.

Wm. Howard 160 ac.

Subdivision E½ S.E. 36 T.N 9W.

H. Bedor

H. Augustine

J. Moffett

J. Weisbrode

C. Rohnic

B. Brugger

S. Lachuber

E. S. Hobbs

M. Hobbs

M. Meyer

A. Beger

N. K. Hall.

P. Kimball

A. Herbiger

G. Ammann

P. Hanstadt

Township Lines T.N. 8 W. T.N.

8 T. 6 N. 9 W. 6 N.

KIMBALLS SECOND AND THIRD ADDITIONS

KIMBALL'S ADDITION

WELLS ADDITION

HERRINGSHAW & THOMPSON'S HEIRS.

CATHOLIC CEMETERY

CITY CEMETERY

W. Hengelmüller

HERRINGSHAW THOMPSON'S SECOND

FIRST

SPEARS

John Myers 20 A.

John Myers 11 ac.

WARRINGTON'S ADD.

Lot No. 7.

No 4 4 A

George Brugger

J. ROBISON'S ADDITION

John M. Ketcaler

HIBBARDS SECOND

HIBBARDS FIRST

Wm. Clark

R. Hummer

Herbert

Sickner

Dixon

Charles H. Dixon

L. Stutzman

C. Hemmeyer Lot 6.25 ac. A.

A. Burton

J. B. Shilling Lot 1 13 ac.

W. Schiff Lot 2 30 ac.

V. Christ

G. Ritter Lot 3 13 ac.

E. A. Wasserreicher Lot 2 7 ac.

F. Argus Lot 4 49

A. Bannman Lot 4 26 ac.

C. Harsch Lot 5 7 ac.

A. Schanz

Temple Block

Nauvoo House

2nd Ward School House

Methodist Church

1st Ward School House

Mansion House

Lumber

Water

Main

Parley

Kimball

Munson

Hotchkiss

White

Ripley

Munholland

Young

Culler

Hibbard

Carlos

Samuel

Hyrum

Joseph

Taylor

Wratle

Robinson

Broadway

Mulholland

Partridge

Durphee

Carlin

Bartlett

Robison

Cheney

Locust

Marion

Wells

Bain

Granger

himself:

> "The place was literally a wilderness. The land was mostly covered with trees and bushes, and much of it so wet that it was with the utmost difficulty a footman could get through, and totally impossible for teams. Commerce was so unhealthful, very few could live there; but believing that it might become a healthful place by the blessing of heaven to the Saints, and no more eligible place presenting itself, I considered it wisdom to make an attempt to build up a city." (1)

It was in such a place, during the years 1839 to 1844 that the Mormons first found conditions propitious for the founding of a city. Land was purchased by the Church in long-term credit and by exchange for Missouri holdings. There was already a surveyed town-site on the spot known as Commerce where two or three families lived. The contrast in dimension and plan between Commerce and Nauvoo is striking. (see plat on opposite page). The direction of the streets of Commerce seem to have been determined by the direction of the Mississippi as it sweeps past the site in a southwesterly direction. Intersecting streets are at right angles, however, and the blocks are of a size with those of the Mormon survey. There are sixteen lots to a block in one subdivision of the Commerce plot, and eight to a block in a second tract. The largest lots are 70 feet by 132 feet, about one-fifth of an acre, but most of the lots are only half that wide. The Mormon survey for Nauvoo follows the plan of Far West. The streets run with the cardinal points of the compass. Main street running north and south is five rods wide, other streets, three. Blocks are 22 x 24 rods, and lots are four to the block, each nearly an acre in size. (2) It is to be noted that while the lots are characteristically large, the streets are narrower than those of any other Mormon city of the writer's acquaintance. Unlike its predecessors, Nauvoo

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(1) Smith, Joseph, History of the Church, (ed. by Roberts, B. H.) vol. iv, p. 371.

(2) The facts here presented are taken from a plat in the office of the Church Historian, reproduced herewith.

was more than a dream.

Thousands of Saints were ready to gather and Nauvoo shortly became the largest city in Illinois, and, next to St. Louis, the most important city of the upper Mississippi. Various estimates of the population have been made. Pooley has summarized these in the following quotations:

> "Estimates of the population of Nauvoo during 1841 vary from 3,000 (Smith and Smith, the Latter Day Saints, 2,501,) given by the prophet himself to 10,000 given by a later writer. (Caswell, the prophet of the Nineteenth Century, 212.) Probably the former is nearer the correct number. Estimates of the Mormon population in Nauvoo the next year show similar discrepancies. Agreeing upon one point alone, that the growth of the community was wonderfully rapid, the authors proceed to place the numbers at anywhere from 5,000 (Gregg, the Prophet of Palmyra, 223) to 30,000 (The New York Herald, June 17, 1843). Here again, fortunately, we have an estimate made by a Mormon and published in the Nauvoo Times and Seasons, which places the population of the city itself at 10,000. (The New York Weekly Herald, Jan. 15, 1842--copied from the Nauvoo Times and Seasons.) Allowing for others scattered through the towns around Nauvoo, 16,000 (Davidson and Stuve, History of Illinois, 498; New York Weekly Tribune, July 15, 1843, estimates 15,000 to 17,000; Madison City Express, July 27, 1843, copies from the Burlington Iowa Gazette and estimates 15,000 to 17,000) may be said to cover the entire number.
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> "In the latter half of 1842, Nauvoo had its greatest population. Not only had the Saints from Missouri occupied the new city, but hundreds from all over the country, complying with the summons of the Prophet to assemble at Nauvoo and aid in the construction of the Temple and the University, turned their faces toward the home of the Church and hastened to take up their abodes either within the city or its immediate neighborhood." (Gregg, Ibid. 162). (1)

On a subsequent page, Pooley gives an estimate of 30,000 for the population of Nauvoo and vicinity by the end of 1844.

In these several attempts to establish themselves in close groupings on land of their own, the Saints acquired a rich experience that goes far to explain their land policies and practices in the Far West. Take the item

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(1) Pooley, William V., Settlement of Illinois, pp 512-513.

of small farm holdings. The prospect of an inheritance attracted the poor in such numbers that large holdings could not have been provided. A statement made by the mob that expelled the Mormons from Jackson county, Missouri, declares that an inheritance consisted of fifteen acres of wild land.(1) Another estimate is thirty acres.(2) But even this was small in a county where eighty acres could be purchased for one hundred dollars. There was nothing to prevent the purchase of larger holdings by individuals who could afford to possess them, and there are records of farms approaching two hundred acres.(3) But the ideal of little farms well tilled obtained and was controlling in Utah at a later period.

The lesson of cooperation was also well learned. We have described the attempts at communism. The experiments were not renewed in later settlements. But there were cooperative practices of some interest. For example, in August, 1838, the inhabitants of Caldwell county met at Far West and organized three agricultural companies. The members of the first voted to enclose a single field of twelve square miles--7,680 acres. The Southern Agricultural Company decided on an enclosure of the same size. The area of the field of the Western Company is not recorded. Joseph Smith participated in making these arrangements.(4) No doubt Brigham Young was also an active party to these plans, for just four months before he had been chosen

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(1) Smith, Joseph, History of the Church, (ed. by Roberts, B. H.) vol. i, p. 396.

(2) Geddes, Jos. A., The United Order, p. 49. Isaac Higbee states that Elias Higbee entered 80 acres in the Big Blue in Lyman Wight's settlement. The piece was divided among three Higbees into a twenty and two thirty-acre parcels. Jensen's Biographical Encyclopedia, vol. i, p. 480.

(3) Timothy B. Foote entered 191 acres and Charles C. Rich 170. Journal History, MS, Jan. 13, 1840. Smith refers to large well-improved farms in Daviess and Caldwell counties. History of the Church (ed. by Roberts) Vol. p. 27.

(4) Journal History, MS., Aug. 30, 1838.

a member of the Presidency of the Church in Zion and was rapidly becoming next to the Prophet, the most powerful man in Mormondom. The proposed enclosure of a common field anticipates in one more significant detail the practice of the Mormons in Utah in laying the foundations of a new colony. The plan was never realized at Far West on account of the outbreak of new persecutions culminating in the expulsion of the Saints from the state. A few years later we find a common field near Nauvoo. September 4, 1845, the trustees of the Big Field Association invited the Church authorities to a public dinner at the field six miles southeast of the city. Six hundred sixteen adults sat down at the table. Brigham Young, now the successor to the martyred Prophet, advised the proprietors to store their 30,000 bushels of corn in the city.(1) It is not now known, though it is very probable, that the members of the association had farmed this joint-enclosure for a number of years.

Or consider the lesson of speculation in land. It is common to explain the failures of the Mormons in this period to the persecutions that beset them on all sides. One may not successfully dispute this point of view. Permanent settlements are not built by migratory populations. There were other causes, however, that went far to defeat the economic efforts of the Saints, not the least of which was the fever of speculation that characterized the times. The conditions in banking and credit for a good part of the period were chaotic. The bitter political war culminating in the termination of the charter of the Second United States Bank in 1836, the demand that payments for public lands be made in specie (1836), the consequent collapse in land values, the failure of hundreds of banks,

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(1) Journal History, MS, September 4, 1845.

the disappearance of hard money, and the depreciation of the currency, added greatly to the financial distress of the Saint and made a successful issue of their business deals practically impossible. That the Mormons were crippled by the purchase of lands at Kirtland at inflated prices is evident from a protest made by the Church authorities and people assembled in conference at Kirtland, December 22, 1836. Complaint is made that the Elders and the churches abroad had been sending their poor to Kirtland without any provision for their subsistence, with the result that all available houses belonging to Church members were full and the lands occupied. The rapid increase of population had seriously affected land values and had placed the Saints in the hands of "extortioners and speculators."(1) The book of covenants was quoted to show that the churches had lands, using wise and honorable men as agents. It was a time of severe trial in the Church. The regular April conference took the form of a solemn assembly in the Kirtland Temple. At this time the Prophet explained the financial distress of the Church as due to the making of contracts for extensive land purchases "where our enemies have signed away their rights." Riches were promised those who would help discharge the obligations.(2) This hope was never realized in Kirtland. There were heavy losses in lands, and also in various business ventures, notably the Kirtland Safety Society, an unfortunate experiment in banking promoted by Church leaders. The distress of the people was charged to the Prophet and his closest advisers and many apostatized.

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(1) Journal History, MS., Dec. 22, 1836.
(2) Smith, Joseph, History of the Church, (ed. by Roberts, B. H.) vol. ii, p. 479.

The distribution of lands at Far West led to considerable disaffection. The local presidency, W. W. Phelps and John Whitmer, had entered the townsite in their own names and evidently intended to profit by the resale, for on the strength of their prospects they had subscribed a thousand dollars each toward the building of a temple at that place. To avoid such a procedure from being repeated, a resolution was brought before a general meeting of the Church at Far West in November, 1837, and unanimously supported that all profits from the laying out of city-plats, should be consecrated to the use of the Church. Subsequently, for a consideration, Phelps and Whitmer transferred the city-plat to the bishop. But they never regained the confidence of the people and were shortly excommunicated.

At Nauvoo the experience was repeated. Lands for the townsite were purchased from at thirty-seven to one hundred dollars an acre. To meet principal and interest payments on the contracts, lands were to be sold at a considerable advance. For example, city lots of a little more than three-fourths of an acre were to be sold at an average price of $500, with a mimimum of $200 and a maximum of $800.(1) This decision was made by the Nauvoo High Council, in October, 1839. The sale of lands was not at first brisk. In January, 1840, Hyrum Smith reported to Joseph, then in Washington, that only enough had been realized to pay for surveying and a few debts.

The distress of Church leaders who had, of course, become personally responsible for the notes given to secure land, grew worse and worse, despite the rapid influx of population, and in 1842, Joseph Smith and others sought relief in bankruptcy under the federal law passed a year earlier to

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(1) Smith, Joseph, History of the Church (ed by Roberts, B. H.) vol. iv, p. 16.

relieve a large body of debtors who had suffered in the general financial collapse of the period. It would not be correct to leave the impression that the debts of Mormon leaders were wholly due to unfortunate land deals. Joseph Smith was constantly harassed by enemies and was frequently brought before the courts of Missouri and Illinois on spurious charges. It has been estimated that his defense cost $50,000. The Kirtland debts were also the occasion of great worry. The debts of the Prophet were later paid, so far as they could be ascertained by his successor. The bankruptcy, of course, did not affect the properties of the Church held by Joseph Smith as Trustee-in-Trust, and land transfers were continued as long as the Saints remained in Nauvoo. The outcome is thus summarized by a contemporary.

> "The effects of speculation in land, by some worried men from without, who bought lands at a low rate, and sold them again at enormous prices, exhausted the pockets of the Saints, crippled all manufacturing interests, and left the city, after the Prophet's assassination, in an almost helpless condition, in a pecuniary point of view." (1)

In bringing this chapter to a conclusion it should be emphasized that the leaders, and the body of the Church as well, that were responsible for the building of the 'Mormon empire' in the Far West, had been trained for their tasks in these experiences in Ohio, Missouri, and Illinois. Ten of the Quorum of the Twelve Apostles as it existed in Nauvoo went west with the Saints. Brigham Young was closely associated with Joseph Smith at Kirtland and at Far West, and took active charge of the migration of the Saints from Missouri. He was doing missionary service in England when the first body of converts were organized to emigrate to Nauvoo. In 1841, as president of the Quorum of the Twelve, he relieved

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(1) Linforth, James, Liverpool to Great Salt Lake, p. 2.

Joseph Smith of much of the temporal work of the Church. In the school of experience lessons are learned quite as readily from adversity as from success. As long as hope remains, disappointment and disaster serve to temper judgment, illuminate understanding, and strengthen determination. That the Mormons profited by their experiences in land settlement in these early years will be evident as we follow them in their migrations to the Far West.

CHAPTER III

THE IOWA SETTLEMENTS

The death of Joseph and Hyrum Smith at the hands of assassins in June, 1844, was followed by a series of oppressive measures against the Saints, some official, some the acts of unrestrained mobs, that culminated in the expulsion of the Mormons from Illinois. The first of the exiles left Nauvoo in February, 1846, and the last remnant, chiefly aged and infirm, were expelled in September. As nearly as can be ascertained, sixteen thousand left Nauvoo and the surrounding areas during the period.(1) It was five years before the population in Utah equalled that number, and even so there were included many converts from the British Isles who came to America after the exodus from Illinois. It was a year and a half before the pioneer band entered Salt Lake valley. The experiences of the Mormons during this interim throws light on their activities and methods in the settlement of lands in the far West.

That they were not broken and scattered by their expulsion from their settled habitations in Illinois was due to the cohesive forces of fear and hope--fear that they could not survive disunited and hope engendered by a belief in destiny. For several years, the conviction had been growing in the minds of the leaders that to excape conflict they must seek an abiding place far beyond the confines of civilization. Joseph Smith himself had arrived at this conviction several years earlier.(2)

During the years of their residence on the western frontier, the

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(1) Ford, History of Illinois, p. 412; Millenial Star, vol. viii, p. 114.
(2) Smith, Joseph, History of the Church, , vol. v, p. 85. (ed. by Roberts)

Mormons had become increasingly cognizant of the possibilities of the Far West as a place of settlement. Independence, Missouri, a principal center of Mormon settlement from 1831 to 1833, was the outfitting point for fur-traders, hunters, and trappers, into the Rockies and along the Santa Fe trail. The first issue of The Evening and Morning Star, a Mormon magazine published at Independence, June, 1832, carried the following item:

> "Early in May, Capt. Boneville's company (150) under the command of Capt. Walker passed this town, on the way to the Rocky Mountains, to trap and hunt for fur in the vast country of the Black Feet Indians. About the middle of May, Capt. Soublett's company (70) passed, for the Rocky Mountains on the same business. At which time, also, Capt. Wythe of Massachusetts, with a company of 30, passed for the mouth of Oregon river to prepare (as it is said) for settling a territory. During the month of May there also passed one company bound to Santa Fe. About the 8th or 9th of this month, Capt. Blackwell's company (60 or 70) passed this place for the Rocky Mountains, in addition."

Over fifty articles on trans-Mississippi country appeared in the Nauvoo Neighbor during the period 1843-45, when it was becoming more and more evident to the Church leaders that a Mormon exodus from Illinois was inevitable.(1) In May, 1842, the first considerable body of emigrants to go to Oregon by the overland route left Independence under the leadership of Dr. Elijah White, and a much larger company, with 120 wagons recruited from all over the frontier country made the journey in the following year.(2) Thereafter the numbers increased annually. The tide of emigration westward was becoming a stream of considerable magnitude, and the consequent increase of geographic information must have been of

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(1) Neff, Andrew L., The Mormon Migration to Utah, MS., University of California, p. 71.
(2) Schafer, Joseph, A History of the Pacific Northwest, pp. 140, 148-149.

great interest to the Mormon leaders, as they contemplated the evident inevitability of removal from their Illinois settlements. California, Oregon, and Vancouver Island were among the localities given consideration. Indeed, when the migration finally got under way, the first Mormon group to reach the West went by ship from New York. This group, led by Samuel Brannan, left port February 4, 1846, and after a voyage of six months around the Horn, arrived at San Francisco July 29, 1846. In February, 1847, Apostles Hyde, Pratt, and Taylor, then proselyting in England, presented a memorial to Queen Victoria, petitioning for a grant of land in Oregon or Vancouver Island.(1) Nothing came of it.

Meanwhile, Brigham Young, who as senior apostle had succeeded to leadership at the death of Joseph Smith, seems to have settled upon the Great Basin, as offering the greatest advantages for the realization of his plans. Very specific information about the Basin was not available. The most authentic source that came into the hands of Church leaders was the report of Fremont, published by the Federal government in 1845.(2) That the leaders studied this report with diligence, there can be no doubt. This entry occurs in the record, December 20, 1845: "With a few of the Twelve and others, heard F. D. Richards read Fremont's journal, giving an account of his travels to California."(3)

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(1) Linforth, James, Liverpool to Great Salt Lake; Liverpool, 1855
(2) The first part of Fremont's report, detailing the explorer's first journeys to the Rocky Mountains, was published before the death of Joseph Smith. Orson Hyde received a copy from Stephen A. Douglass while in Washington, attempting at the instance of the Mormon prophet to get assistance for the migration of the Saints into Oregon. A copy was sent to Smith. See Roberts, B. H., Rise and Fall of Nauvoo, p. 268. This account of Fremont's was reprinted and incorporated with that of his explorations of 1843-44, and published in 1845.
(3) History of Brigham Young, Ms. p. 308.

In anticipation of their removal from Nauvoo the Mormon leaders had organized by 'hundreds' for the long and indefinite journey ahead. A 'hundred' consisted of approximately one hundred families. There w ere twenty-five of these each headed by a captain with assistants known as captains of fifties and captains of tens.(1) This organization had been tried successfully at Far West in 1838 as a means of distributing labor and food and for defensive purposes. It was adhered to by all the companies crossing the plains and was found useful in the preliminary labors incident to the settlement of Salt Lake valley.

It was the intention of the Church leaders to push through with a pioneer group all the way to the Rocky Mountains, hoping that by leaving Nauvoo in February they might select a place for settlement and put in crops early enough to mature before the main migration came on. This was indeed the plan followed but only after a delay of one year due to the inadequacy of the outfits of many of the families, insufficiency of supplies, inclemency of the weather, and other unforseen and unavoidable causes of delay. Meanwhile temporary settlements were made in Iowa and on the west bank of the Missouri. The cooperative methods followed were not only essential to the success of the whole migratory movement, but were fruitful of experience of great value later.

At a place they named Garden Grove--now a village of that name in Iowa--about 145 miles from Nauvoo, the Mormons established a settlement

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(1) Organization by fifties and tens had been tried at Far West in 1838 as a means of distributing labor and food and for defense against mobocracy. See Smith, Joseph, History of the Church (ed. by Roberts, B. H.) Vol. III, p.181. The idea was doubtless adopted from the Mosaic organization for administering justice as described in Deuteronomy, Ch. 1, 15.

to serve as a place for rest and recuperation for those finding it necessary to pause for a season. Here two enclosures of 390 acres and 325 acres respectively were laid off and fenced cooperatively.

One hundred men were selected to make rails, ten to build fences, forty-eight to build houses, twelve to dig wells, ten to build bridges, and all others, except those required to herd cattle and to serve as camp guards, devoted themselves to clearing lands, plowing and planting, When the fencing of the south field was completed, houses were built along the east and west sides of the field. Brigham Young announced rules to govern the possession and use of land. All who had assisted in improving lands and who were now returning to Nauvoo for their families were to be protected in their rights of possession. They should have equal privileges with those who should remain, as should those who would come later. Anyone choosing to do so might go and locate for himself outside the common field, but he need not expect aid from the community if his own plans should fail. A local presidency of three was appointed and instructed to apportion the lands with due regard to the size of families. They were to expel all idlers from the camp. No one was to retain land who would not till it. Neglected crops were to be gathered by the president into the common storehouse.(1)

Another settlement called Mount Pisgah was established about thirty miles west of Garden Grove. A 'Big Field' of about 1400 acres, comprising parts of sections 7, 8, 16, 17, 18, of what is now known as Jones Township, Union County, Iowa, was enclosed with a pole and rail fence on the east and north sides, the Grand river forming the boundaries on the west and south. (2)

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(1) History of Brigham Young, MS., 1846, p. 170.
(2) Iowa Settlements, MS.

Before leaving to proceed with his pioneer band farther toward the west Brigham Young instructed the local presidency, chosen to direct the affairs of the new settlement, to survey the enclosed lands into five, ten, and twenty-acre portions and distribute them by casting lots, (1) thus anticipating the plan of distribution followed two years later in the Salt Lake valley.

Brigham Young now moved forward eagerly to the Missouri, arriving about the middle of June. He still entertained hopes of leading a party over the mountains that season, but Fortune decreed otherwise. Before arrangements could be made, a call came from the Federal government for a battalion of five hundred men to engage in the war against Mexico. Response to this demand was prompt, but the removal from their midst of so many able-bodied men was followed by a decision to defer the journey to the Great Basin until the following spring. In the course of the next few months a number of Mormon settlements were made on both sides of the Missouri River. The principal one on the east bank, named Kanesville, after Colonel Thomas L. Kane, a great friend and benefactor of the Mormon people, became afterwards Council Bluffs. The headquarters of the Church were established on the opposite side of the river at Winter Quarters, a name suggestive of the temporary nature of the settlement.

The actual location for the winter quarters was not made until mid-September, the Saints having remained in temporary camps during the summer. At this time there were ten or eleven hundred wagons on the Missouri. Some difficulty was experienced with individuals who wanted all the benefits of camp protection and community insurance against the hazards of illness,

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(1) History of Brigham Young, MS., 1846, p.185.

Indian attack, and other threats of the frontier with a minimum of personal sacrifice. Though believing firmly in private property rights as the basis of a permanent system, the Mormon leaders saw clearly that the success of the present enterprise depended upon community of effort and of sacrifice. They had themselves divided their supplies with others and now insisted that the same principle be followed by all. The necessity of pooling of interests was a regular theme of the frequent 'sermons' delivered at camp meetings. Some money had reached camp from the members of the Mormon Battalion of the United States Army who had consigned their wages to their wives. Brigham Young outlined a plan to pool these funds and send them by agents to St. Louis to be expended for supplies, thus getting three times as much as could be had at the Indian trading posts. He displayed some irritation at the short-sightedness of the women who wanted to control their own means. In the end, his proposal was sustained by a show of hands. (1)

In the operation of lands an imperative reason for working in association was the scarcity of implements and tools. A wise distribution of them and a careful pooling and division of all labor assured the greatest possible returns. Facing the winter with the slenderest surplus of means, the survival of many would have been impossible had not individualistic tendencies been promptly suppressed. One marvels at the results of their cooperative efforts. On August 28, the Mormon leaders met with the Omaha chiefs upon whose lands they were encamped and obtained permission for temporary occupancy. Consent was likewise obtained from the Indian Agent. The location for the 'city' was made by a majority of the Twelve Apostles

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(1) Journal History, MS., August 16, 1846.

then in camp and surveying began the same afternoon (September 11, 1846). The town was laid out in blocks twenty by forty rods, and each block divided into twenty quarter-acre lots, four by ten rods. The houses were built on the outside (front) line of the blocks. Water was supplied by wells dug at the intersection of the interior lines of each four lots, five wells thus serving twenty families. A stockade was formed by enclosing the spaces between the houses on the outside line of the city survey with pickets. In October a grist-mill was built on the river. Within the short space of three months, 621 houses were erected, 538 of logs and 83 of sod. (1) A council house, a very necessary edifice, was also built near the home of the President.

Meanwhile the people were organized into wards--twenty-two in all--with a bishop over each. Twelve men were selected to form a municipal high council combining civil and ecclesiastical functions. These are not to be confused with the Twelve apostles whose jurisdiction, since the dissolution of the First Presidency by the death of Joseph and Hyrum Smith, extended over the entire Church. The local High Council was charged with the general supervision of camp discipline, but were subject to the Twelve, whose decisions were the supreme law of the camp.

Of the four thousand people at Winter Quarters, (2) about one-third left for the Rockies between early April and the middle of June, 1847. The remainder were occupied in cultivating the fields, caring for cattle, and with all due diligence getting together the necessary outfits and supplies

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(1) Journal History, MS., Dec. 31, 1846.
(2) By actual count of the bishops in December, there were 3,483 members of the twenty-two wards, and 210 on the east side of the river. A small company that had wintered among the Ponca Indians west of Winter Quarters were recalled to the latter place in March.

for the journey to the promised land as soon as their appointed time should come. Most of the pioneers, including seven apostles, returned to Winter Quarters from the Salt Lake valley in the fall of 1847, to get their families and to direct the organization of the Saints for the great migration. To avoid friction with the Omaha tribes and the agents of the Federal Government, who objected to a longer occupancy, the Church leaders advised the people to move across the river, where a number of thriving settlements had already been made upon lands recently acquired by the Federal Government from the Pottawatamie Indians. Thus Kanesville became the chief outfitting point for the westward migration and Winter Quarters--a city of a day--was abandoned.

In its lay-out, the town of Kanesville was a departure from the characteristic four-square villages that the Mormons built everywhere else. Some one has described the street plan as having the appearance of the markings on a shattered pane of glass. (1) This is accounted for partly by the contour of the country, but principally because "the people who settled and improved the land regarded their stay and improvements as only temporary, and consequently built without regard to the place being surveyed or laid off in any regular form and all the subsequent buildings and improvements have been erected and made upon said lands upon a similar principle." (2)

After the establishment of the headquarters of the Church in the Salt Lake valley, the members in Iowa were advised to emigrate as rapidly as they could dispose of their holdings and provide suitable outfits. There was a fairly good market for farms as population was moving rapidly

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(1) Iowa Settlements, MS.
(2) Extract from a petition for a grant of land for a townsite, December 27, 1851, published in Frontier Garden, January 9, 1852.

westward. Many converts to the Church from the British Isles, finding it necessary or convenient to pause for a season on the way to 'Zion,' bought out the claims of their departing brethren, and resold later to non-Mormons. After 1852, few Mormons remained in these settlements.

CHAPTER IV

THE SETTLEMENT OF SALT LAKE VALLEY

In the two preceding chapters we have presented an account of the experiences of the Mormon people in their attempts to establish settlements in Ohio, Missouri, and Illinois, and in their temporary occupancy of lands in Iowa and Nebraska. The lessons learned in these early efforts are the background and the starting point for a discussion of their activities in the far West where lay the scene of their eventual success as colonizers. In the present chapter we shall first review the social ideals and objectives that were to seek expression in a new geographic environment; then we shall point out the factors of that environment that required new adaptations; and finally we shall describe the methods pursued in the allotment and utilization of lands in the settlement of the Salt Lake valley.

First then we should keep in mind the social solidarity of these Mormon migrants. Drawn together by their common religious beliefs, they had been sifted by apostasy and welded by opposition. The rank and file looked upon their leaders as prophets and relelators whose words bore the weight of divine authority. With such faith in their leadership obedience in all things followed as a matter of course. If any questioned they encountered general disfavor and in extreme instances ostracism. On the other hand leadership was not wholly autocratic. Rather it was government by the wise men. A presidency of three, twelve apostles, bishops and many local officers shared in the authority of the priesthood. By the principle of common consent, by which those called to leadership were presented

to the membership of the Church for acceptance, the latter had a limited voice in Church government. All believed in destiny. They thought of themselves as a chosen people, called from among the world to assist in the restoration of the gospel and the building of the kingdom of God. They were to expect diabolical interference, but they were assured of ultimate success. Through their ministry men of all nations were to be called to repentance and the righteous were to be gathered as one people. Opposition had taught them the utility of compact groupings. In Nauvoo they had withstood assault for some time but had at last fled before superior numbers. It is not difficult to understand their longing for an isolated place in the West where they might build on such strong foundations that they would not again be overborne.

From the viewpoint of land policy it is especially important to have in mind the farm-village pattern which had been given by Joseph Smith to the Church leaders in Missouri in 1833,(1) and which had been followed there and in other attempts to establish settlements. The original plat of Zion City was among other valuable records brought to Utah by Church leaders. It was thoroughly familiar to Brigham Young and his associates and became the pattern for the settlement at Salt Lake City and in subsequent colonization projects.

Certain cooperative procedures had been developed that were to prove especially useful in the earlier stages of western settlement. The pooling of resources of the strong and the weak through the United Order(2) and the tithing system supplied means to assure the support and economic advancement of the poor and to provide for common needs in the form of roads,

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(1) See above, p.13.
(2) See Above, pp. 8 and 9.

bridges, and public buildings. The practice of common enclosure of land to economize labor and material had been repeatedly followed.(1)

Two other attitudes growing out of early experience should be pointed out. The Mormon people, now about to undertake extensive colonization projects had acquired a predisposition for full utilization of land. Poverty and the advantages of close settlement had dictated small holdings in general. The requirements of the new environment which we shall shortly indicate made necessary the continuance of the practice. Closely related to the policy of full utilization of land was the abhorrence of land speculation engendered by the unhappy experience in Kirtland and Nauvoo.(2)

With the ideas and tendencies just outlined, the Mormon people confronted in the Great Basin new environmental factors having a bearing on the land system which they developed. We shall refer to three that have special significance. The first is aridity. The light annual precipitation, especially scant in the growing season, makes necessary the artificial watering of crops. It was soon obvious to the Mormon pioneers that settlement would be limited by quantity and availability of water. A large population, essential to the designs of the Church leaders, could be possible only by restriction in the area of individual holdings. Moreover settlements must of necessity hug the streams. Secondly, the presence of hostile Indian tribes precluded the possibility of individual settlement of land, had anyone been disposed to attempt it, and made group settlement imperative. Finally, the absence of established government and later remoteness from the source of authority gave the Mormons a large degree of freedom in determining the nature of their institutions. Failure to extend the application of Federal land laws to the territory of Utah until 1867, though it left titles insecure, gave the Church leaders opportunity to subdivide the lands in accordance with their own ideas.

(1) See above, pp. 20 and 30.
(1) See above, pp. 21-24.

The delay at Winter Quarters gave the Church leaders opportunity to mature their plans for transferring their people to the Great Basin. It was a task of immense proportions, which even though undertaken by experienced frontiersmen could only be accomplished by the most careful execution of a well-arranged program. Even so, great risks were to be taken. Heretofore they had always been within a few days' travel of sources of supplies. On their travels across Iowa, they had been able to obtain additional breadstuffs in exchange for money, household goods, and labor. Now they were to place themselves a thousand miles from their own base on the Missouri and almost an equal distance from the settlements on the Pacific coast. With such food-stuffs, tools, and farming implements, as they could carry on a three-months' journey into the wilderness they must create a self-sufficing economy.

To realize this objective, Brigham Young followed the plan that had taken shape in Nauvoo and that he had vainly attempted to carry through in 1846. He selected a group of pioneers, men possessing among them an unusual fund of intelligence, scientific training, and frontier experience, and unincumbered by wives and children,(1) to go on ahead of other companies to establish the trail, determine the location, and lay the foundations of a settlement. These were to be followed several weeks later by a much larger company made up of such families as could obtain the ample outfit of supplies and equipment considered necessary for the operations of the first year. The footing on the soil which these first-comers could establish, especially if they should be able to produce a surplus of food

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(1) Three women, wives of Brigham Young, Heber C. Kimball, and Lorenzo D. Young, and two children were at the last minute included in the company.

would insure the success of subsequent emigrations.

It is no part of our present purpose to follow the pioneer company across the plains and through the high mountain passes down into the Salt Lake basin. The adventures and hardships of that memorable journey have attracted wide attention and have been often recounted. It was with mingled feelings of joy and concern that the weary travellers and their sick chieftain--Brigham Young was ill with mountain fever--beheld, as they emerged from the mouth of Emigration canyon the sun-baked lands of the valley and the beautiful salt sea shimmering in the hot July sun.

One of the first concerns of the company was to put in crops. It was a long chance, but worth the effort. The lack of green vegetables had been a cause of plague in the camps in Iowa and at Winter Quarters, resulting in great suffering and many deaths. Besides, the seed potatoes could be saved only by immediate planting. On July 23, after a prayer of gratitude and dedication, an organization was effected to begin plowing. During the day three plows were broken in the hard-baked soil. After a dam was built and the waters of City Creek were turned upon the land, the work proceeded with greater success. Within eight days a total of fifty-three acres had been plowed, and by August tenth eighty-three acres had been plowed and planted, and the men and teams released to other labors.(1) Little was obtained from these plantings. Cattle consumed all including potato vines. Nevertheless, a supply of small potatoes from the size of a pea to half an inch was harvested and successfully used for seed the next season.(2)

Meanwhile plans for a city were laid. The Church leaders devoted the day of July 27 to a preliminary examination of the lay of the land. On the following morning Brigham Young called the Twelve together. Walking

(1) Jenson (Andrew), Historical Record, IX, pp.83,88.
(2) Pratt, Parley P., Autobiography, p. 401.

to a point between the forks of the creek (City Creek) he said, "Here's the place for the temple to be built." It was moved and carried that the Temple lot contain forty acres, that the city be laid out in ten-acre squares, each divided into eight lots, ten by twenty rods, that streets be eight rods wide, and that houses be build one to a lot in the middle, as a precaution against fire, and twenty feet back from the line, to leave ample space for the planting of flower gardens. Four squares were reserved for public purposes. These decisions were then presented to the entire camp and concurred in by unanimous vote. The similarity of the plan for Salt Lake City to that of Zion city will be noted.(1)

The decision to lay out a city having been made, the Twelve were sustained by vote of the camp to act as a supervising committee. A set of surveying instruments, brought from abroad in the spring of 1847 and delivered to President Young at Winter Quarters, had been a carefully guarded portion of the equipment of the Pioneers. With these instruments the survey of the city was begun August 2.(2) The work was shortly interrupted long enough to test the chain with a standard pole brought from the mountains.(3) Only one modification was made in the original plans. The Temple square was reduced to ten acres, uniform with all the other blocks. The survey, since known as Plat A and comprising 114 blocks, was completed August 20.(4)

Though no actual distribution of lands were made at this time the leaders reserved on the city plat certain blocks for themselves and friends in Winter Quarters. Thus Brigham Young selected two tiers of blocks running

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(1) See above, pp. 13-14.
(2) Egan, Howard, Pioneering the West, pp. 110-11, 114.
(3) Clayton, William, Journal, p. 340.
(4) Egan, Howard, Pioneering the West, p. 125. In the plat the blocks were numbered up to 135, but there were omissions of several blocks where the survey ran into the foot-hills, west of City Creek.

north and south through the city and each of the apostles present made reservations.(1) The general distribution of lots was not made until a year later when the population had been greatly augmented by the fall arrivals of 1847 and the very large companies that accompanied the Church leaders on their second journey from Winter Quarters in 1848.

The apportionment of lands at this time, and for the next twenty years in fact, was based upon squatters' rights alone. When the Pioneers entered the valley of the Salt Lake the area was still nominally a part of Mexico; but the armies of the United States were already marching toward the capital of that country, and shortly, February 2, 1848, the region chosen for settlement by the Mormons became part of the United States. But even so, the lands were not lawfully opened for settlement until many years later. Anticipating the same leniency in the enforcement of the lands laws that had characterized earlier settlement on the public domain and being pronounced individualists in regard to property rights, the Mormons devised a system of their own to govern the distribution of land and to secure title in the individual.(2)

With the planting of vegetables well-advanced, and the city survey proceeding rapidly, the brethren turned their attention to the provision of shelter. The presence of Indians in the valley prompted the construction of a fort. One of the ten-acre squares, now the Pioneer Park, was selected for this purpose. The provision of building materials presented a new problem. East of the Missouri river timber had been so plentiful that land had frequently to be cleared for farming. The construction of a house was relatively a simple matter. But there was no timber in the

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(1) Woodruff's Journal, MS. Aug. 13, 1847.
(2) See Chap. vii for fuller treatment.

Salt Lake valley. Except for a few cottonwoods and willows along the stream courses, the valley was treeless. There were supplies in the canyons, at distances of five to twenty-five miles, but to get at these in quantity would require a good deal of road-building. In Winter Quarters some houses had been built of sod. Even this was not available. The grasses of arid lands are too thin to hold the soil together. A little west of the site selected for the fort extensive clay-beds were found. It was therefore decided at a meeting on August first to construct the fort of logs and adobes--sun-dried bricks the making of which had probably been learned by the Battalion boys from the Mexicans.(1) It should be said that at this time the Mormon colony numbered about 400, comprising in addition to the pioneer company of 148, a company of Saints from Mississippi that had wintered at Pueblo and many members of the Mormon Battalion that on account of sickness had been detached and sent back to Pueblo for the winter. Scouts from these groups had intercepted the Pioneers, whereupon arrangements were immediately made to have them fol ow to the valley of the Salt Lake. This increase in numbers greatly facilitated the labors of laying the foundations of the new settlement. While some busied themselves getting out logs from the canyons, others were molding 'dobies' of substantial proportions, eighteen inches long, nine inches wide, and four and one-half inches thick. On the tenth of August the actual laying up of the walls of the fort began. The walls of the fort

> "were twenty-seven inches thick and nine feet high on the outer side. It was built as a construction of huts joined together in rectangular form around the outside of the ten acres on which it stood. The east side was built of logs, and the three other sides of adobe walls. The roofs slanted but slightly inward, and were made of brush covered with earth. Each house had a loop-hole facing the outside and a door and windows, facing the interior. The main entrances, which were on the east and west

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(1) Journal History, MS., Aug. 8, 1847.

> sides of the stockade, were carefully guarded by heavy gates, which were locked at night. In the winter and spring months the snow and rain caused the mud to leak through the roofs, to the great discomfort of the inhabitants." (1)

In the construction of these houses the Church leaders labored with the rest when conditions permitted. Brigham Young started four houses (rooms); Heber C. Kimball, five; Willard Richards, two; and so forth, around the square. After the departure of the Pioneers at the end of August to return to Winter Quarters, the work on the dwellings was continued by those left behind and the large companies that arrived during the late fall. The following March, it was officially reported that 423 houses had been constructed.(2) I have nowhere seen the dimensions of these cabins. It is known that the original fort was extended by the addition of two other squares, at least. One official statement has it that four squares were enclosed with a total of forty-seven acres and housing accommodations for five thousand persons.(3) If the longer dimension were not to exceed eighteen feet, over four hundred of them could be built on the perimeters of three ten-acre squares. Within the enclosures, the cattle could be safely kept at night. To economize labor it was decided to enclose all the lands to be cultivated within one fence. The realization of the plan required many months. A field was marked off of 5133 acres, and while some plowed others fenced. Provision was made for those whose time was absorbed in public services, by the allotment to each of fifteen acres of plowed land.(4)

> "The line of fence begins at the steep point in the bluffs, just south of the Warm Springs and runs directly to the north-

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(1) Smith, Joseph F., Essentials in Church History, p. 457.
(2) Epistle of the High Council, Journal History, MS., March 6, 1848
(3) First General Epistle, Millennial Star, Vol. XI, (1849), p.228.
(4) Journal History, MS., October 19, 1847.

> west corner of the Fort, then starts from the southeast corner of the Fort, and bears east of south to some distance beyond Mill Creek, then east to the bluffs again; whole length of fence line, besides the fort, 3638 rods." (1)

The bluffs referred to mark the line of the bench lands that skirt the Wasatch mountains. The streams from the canyons have cut deep gorges through these benches almost to the level of the valley floor. The best plow-land lies between the bluffs and the Jordan river. It is practically level, sloping gently to the west and north and north and was easily irrigated from the waters of the several creeks flowing from the mountains in the east. The enclosure included about three-fifths of the city plat (Plat A) and the lands south and east of the city for several miles. To provide over eleven miles of pole fence was a task of no small proportions and was never adequately completed. In this field 872 acres were sown with winter wheat, the balance being reserved for spring and summer crops.(2) In due season extensive plantings of corn, buckwheat, potatoes, and a variety of vegetables were grown. An interesting and effective organization for carrying on the agricultural work was developed. The control units during the journey on the plains had been arranged in military order. The large companies were divided into hundreds, each hundred into fifties, and each fifty into tens. Over each unit was a captain. It was now suggested that the lands be allotted for the first year to these groups.(3) There must have been between forty and fifty tens in the colony. To each ten and to each member of the ten was apportioned as much land as could be successfully cared for with available man-power and equipment. The

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(1) Epistle of High Council of Great Salt Lake City to Brigham Young and Council, Journal History, MS., March 6, 1848.
(2) Epistle of High Council of Great Salt Lake City to Brigham Young and Council, Journal History, MS., March 6, 1848.
(3) Journal History, MS., October 24, 1847.

average was not less than ten acres to the man.[1]

In November 1847 a company of 18 men, were sent to California to get seed and cows. They purchased 200 head at six dollars, paying $230 cash, and getting a twelve months credit on the balance. They returned to the valley about May first with the herd, less forty head that had escaped on the Mohave desert.[2]

While these preparations were going forward, mechanics were busy providing other essentials. A grist mill was hastily constructed to grind the grain set aside for use the first winter.[3] One saw mill in operation and two or three others under construction were reported by the Presidency of the High Council in March, 1848. The manufacture of kitchen chairs, tables, beds, tubs, churns, and a few bureaus was noted.[4]

The various building operations requiring wood, fences, cabins, bridges, and furniture, together with the cuttings for fuel made a serious draft on the nearest supplies of timber. Trails were soon made to limited supplies in Red Butte Canyon, six miles east, and at the mouth of Little Cottonwood, about twenty miles southeast of the Pioneer camp. Cutting was carefully regulated by order of the High Council. A Timber, Fuel, and Pole Committee was appointed. This committee took an inventory of wood and timber supplies on February 10, 1848, and reported as on hand,--but privately owned, of course,--202 loads of wood, 2696 fence poles, 196 covering poles, 306 house logs, and 118 saw logs.[5]

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(1) From a letter of John Smith to Geo. A. Smith, Journal History, MS. March 5, 1848, we learn that John Smith's ten was to cultivate about 100 acres for spring planting.
(2) Journal History, MS., May 1, 1848.
(3) Epistle of High Council of Great Salt Lake City to Brigham Young and Council, History of Brigham Young, MS., March 6, 1848.
(4) Journal History, MS., March 6, 1848.
(5) Ibid. Feb. 10, 1848.

The colony experienced much hardship and privation during the first year. The flat-mud roofs of the hastily constructed cabins let the melting snows through upon beds and clothing. Killing spring frosts destroyed the garden crops and the crickets (1) came in hordes to devour the grain. Only the timely arrival of thousands of gulls from the Great Salt Lake, sent, as it seemed to the despairing Saints, by divine providence saved enough of the fields to assure a bread supply.

The most significant event of the second year was the return of the leader Brigham Young and others who had gone to Winter Quarters in the fall of 1847 after month in the valley. They were accompanied now by hundreds of those who had tarried on the Missouri. A period of vigorous activity at once ensued. It was decided to permit building outside the forts and Brigham Young and Heber C. Kimball were unanimously sustained as a committee to apportion city lots. The allotments to the members of the pioneer company a year before, were not interfered with, but now there were hundreds of new claimants. Assignments were made by lot and without cost to the settler except for a fee of $1.50, divided into a surveyor's fee of one dollar and a recording fee of fifty cents for each lot. The original survey, Plat A. of one hundred ten blocks, exclusive of public squares, eight lots to a block, was quickly taken up, and a second survey of sixty-three blocks, designated Plat B, was laid out adjoining Plat A, on the east. (2)

Meanwhile, arrangements proceeded for the apportionment of farming lands to individuals. A plan for a common enclosure was formulated by

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(1) Haight, Isaac C., Journal; Journal History, MS. April 1.
(2) Journal History, MS., Sept. 24 to Sept. 30, 1848.

Brigham Young and Heber C. Kimball and presented to the High Council, with suggestions for a canal for irrigation, tapping the Big Cottonwood Creek and running along the upper east side of the farming lands, and serving as one line of fence. It was also proposed that farm lands be assigned by casting lots.(1) The proposals were endorsed and presented to the people at a public meeting the next day. Those desiring farm lands were to file requests with the clerk, indicating the number of acres wanted. Needless to say the clerk literally did a 'land-office business!' The office was besieged till late in the night and re-opened at daybreak to accommodate the eager applicants. It was with great difficulty that the President, coming to the office in the morning, got through the crowd. Altogether, seven hundred and seventy-six applications were filed for a total of 9650 acres. A week later the applicants had increased to eight hundred and sixty-three and the acreage applied for to 11,005.(2) A plan to equalize the values of the respective holdings was devised. Says Brigham Young:

> "It is our intention to have the five acre lots next to the city to accommodate the mechanics and artisans, the ten acres next, then the twenty acres, followed by the forty and eighty acre lots, where farmers can build and reside. All these lots will be enclosed in one common fence, which will be seventeen miles and fifty-three rods long, eight feet high; and to the end that every man may be satisfied with his lot and prevent any hardness that might occur by any method of dividing the land, we have proposed that it shall all be done by ballot, or casting lots, as Israel did in days of old." (3)

In the actual realization, only five and ten-acre tracts were included in the field, but arrangements were made for another field beyond. It was understood that each allottee should build fence proportionate to his acre-

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(1) Journal History, MS., Sept. 30, 1848.
(2) Ibid, Oct. 2, 1849
(3) Epistle to Orson Hyde, et al., Journal History, MS., Oct. 9, 1848.

age, regardless of location within the field. The clerk estimated that for each acre, eight feet, ten inches of fence would be required.(1) But he had in mind a field of fifteen square miles. In February, 1849, Brigham Young gives the length of the required fence as 5240 rods, for a total acreage of 6,027, less than ten square miles.(2) If this is a correct figure, the land was fenced in two or more pieces. Fifteen square miles, or 9600 acres, at 8.833 feet of fence to the acre (Bullock's estimate) would require 5,139.2 rods of fence. Brigham Young may have had Bullock's estimate in mind and failed to make the correction for the reduced acreage. The drawings for the five-acre lots were conducted by a committee.(3) The drawings for the ten-acre lots must have followed promptly, for on November 5, Brigham Young advised the mechanics, whose full time was needed for public works, to relinquish their five and ten-acre lots to the farmers, adding that if the latter should prove insufficient to battle successfully with the crickets, the mechanics could be called as a reserve corps.(4) Records of the allotments were carefully recorded on plats prepared for the purpose.

The lands beyond the Big Field were too far to be reached easily by people living within the city. Building was therefore begun on the farms. In October, Brigham Young writes that the Saints were beginning to scatter into different cities and towns in the valley.(5) A settlement was made on a square mile of ten-acre tracts south of the Big Cottonwood creek.(6)

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(1) Journal History, MS., Oct. 17, 1848, quoting John Brown's Journal.
(2) History of Brigham Young, MS., 1849, p. 20.
(3) Ibid. p. 76
(4) Ibid. p. 79
(5) Journal History, MS., Oct. 11, 1848.
(6) Journal History, MS., Oct. 17, 1848, quoting John Brown's Journal.

The settlement of the valley north of Salt Lake City, (Davis County) had begun a year earlier when Perrigrine Sessions camped and herded cattle all winter on the present site of Bountiful. In 1848 settlers established themselves west of the Jordan river (1) and in 1849 settlement had spread to the extreme southeast section of the valley, (2) wherever water was to be had. Both group and individual settlement occurred, the latter somewhat exceptional.

Arrivals of large numbers of immigrants each year led to the need for more and more city lots and the boundaries of Salt Lake City were extended in 1848 and again in 1849. The following picture of how things appeared to a visitor in mid-summer 1849, is worth quoting:

> "Descending the table land which bordered the valley, extensive herds of cattle, horses, and sheep, were grazing in every direction, reminding us of that home and civilization from which we had so widely departed--for as yet the fields and houses were in the distance. Passing over some miles of pasture land, we at length found ourselves in a broad and fenced street, extending westward in a straight line for several miles. Houses of sun-dried brick were thickly clustered in the vale before us, some thousands in number, and occupying a spot about as large as the city of New York. They were mostly small, one story high, and perhaps not more than one occupying an acre of land. The whole space for miles, excepting the streets and houses, was in a high state of cultivation. Fields of yellow wheat stood waiting for the harvest, and Indian corn, potatoes, oats, flax, and all kinds of garden vegetables, were growing in profusion, and seemed about in the same state of forwardness as in the same latitude in the States.
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> * * * * * * * * * * * * * * * * * *
>
> There was abundance of mechanic shops, of dressmakers, milliners, and tailors, etc; but they needed no sign, nor had they time to paint or erect one, for they were crowded with business. Beside their several trades, all must cultivate the land, or die; for the country was new, and no cultivation but their own within a thousand miles. Everyone had his own lot, and built on it; everyone cultivated it,

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(1) History of Granite Stake, MS.
(2) History of Jordan Stake, MS.

and perhaps a small farm in the distance.

> And the strangest of all was, that this great city, extending over several square miles, had been erected, and every house and fence made, within nine or ten months of the time of our arrival; while at the same time, good bridges were erected over the principal streams, and the country settlements extended nearly one hundred miles up and down the valley.
>
> This territory, state, or as some term it, 'Mormon Empire,' may justly be considered as one of the greatest prodiges of the age, and, in comparison with its age, the most gigantic of all republics in existence, being only its second year since the first seed of cultivation was planted, or the first civilized habitation commenced." (1)

The description of Salt Lake City given by Howard Stansbury is in substantial agreement.(2)

At this time the colonial movement into other valleys to be described in a later chapter had already been launched. By the construction of more and longer canals additional lands were continuously made available in the Salt Lake valley and a full account of its settlement would require our following it forward for many years. But such is not essential to our purpose.

Before closing our account of the founding of Salt Lake City as the hub of later colonial enterprises of the Mormon people it should be noted that the agricultural developments in the valley, as everywhere among Mormon settlements, were paralleled by supporting and supplementing industrial activities of considerable extent. The authorities encouraged and promoted the manufacture of textiles, iron, sugar, paper, and all kinds of fabricated articles needful in a growing community. From the beginning public works on an extensive scale were maintained. Upon a portion of Temple

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(1) New York Tribune, Oct. 9, 1849. See also Kelly, Wm., An Excursion to California for similar picture.
(2) Stansbury, Howard, Expedition to the Great Salt Lake, pp.128-130.

Square, shops were erected, where mechanics were employed in the public service. They were paid from tithing funds. Occasional labor was also accepted on tithing account. Thus were constructed many public buildings--the Council House, the Social Hall, the Bowery, the Tabernacle. Ground was broken for the great Temple in February 1853, and the corner-stone laid on April 6. The edifice was completed forty years later.

We have purposely omitted in this account of Mormon colonial beginnings, all reference to political and civil matters. In bringing this chapter to a close a brief comment will not be out of place. For years ecclesiastical government was inextricably intermingled with civil government. Until March, 1849, there was no other than Church authority, functioning through the general Presidency, the Twelve, the High Council, and the bishops. In that month the provisional State of Deseret was set up with Brigham Young as governor. Eighteen months later Congress passed the enabling act under which Utah was organized as a territory. Through the influence of Colonel Thomas L. Kane, Brigham Young became the first governor, continuing in that office until succeeded by Alfred Cumming of Georgia in 1858. Thus for ten years, the power of the Church and that of the State were united in the hands of Mormon leaders.

CHAPTER V

EXTENDING THE BOUNDS OF EMPIRE

Brigham Young's dream of empire was inspired by political and economic, as well as religious motives. He did not expect to establish a politically independent commonwealth, but he did hope to bring together a body of people so numerous and so tied by common interests that they could not again be easily dispossessed. He is reported to have said: "If the people of the United States will let us alone for ten years, we'll ask no odds of them.(1) Upon his arrival in the Salt Lake valley he had said that he intended to know every hole and corner from the Bay of San Francisco to the Hudson Bay.(2) There is no doubt that the Mormons planned to pre-empt as far as possible all the choice lands to prevent occupancy by those who might oppose them. They did not expect to exclude those who were not members of the Church--they brought two or three along in the first pioneer company--but they did hope to keep them in the minority. In the settlement of 'Dixie', for example, men were sent out to take and hold certain choice valleys, not because they were needed at once for settlement, but because some non-Mormons were thought to be intending to settle there. In later periods of Mormon history when anti-polygamy raids were being conducted by Federal officials, exploration for lands beyond the territorial limits of the United States was stimulated. Apart from political dominance the survival of the Mormon commonwealth depended on economic self-sufficiency. A wide diversity of mineral and agricultural

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(1) Roberts, B.H., Comprehensive History, Vol. IV, p. 269.
(2) Journal History, MS., July 28, 1847.

products was needed, and some early colonies were established in places considered favorable to their production.

The Mormons gathered geographical information by two principal means, common report, and their own organized explorations. From the official reports of Fremont's explorations (1) the Church leaders had gleaned carefully before they ever set out for the Basin. (2)

But there was little in Fremont's observations to attract settlers to the Great Basin, and nothing by way of detail that would indicate the location of lands suitable for colonization. On the contrary, Fremont could see possibilities in grazing only. Captain Stansbury explored the Great Salt Lake and vicinity in 1849-50. His contribution, although possessed of great scientific importance, being limited to a study of areas already familiar to the Mormons, had little or no value in determining locations for new settlements.

Consistent with his declared intention of discovering the possibilities of the West for settlement, Brigham Young encouraged systematic and careful exploration. Very soon after arriving in the valley of the Salt Lake the Pioneers made journeys beyond the limits of the valley; south, west, and north for the purpose of increasing the knowledge of local geography. (3)

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(1) Fremont, John C., Report of the Exploring Expeditions to the Rocky Mountains, 1842, and to Oregon and North California, 1843-44.

(2) The first part of Fremont's report, detailing the explorer's first journey to the Rocky Mountains, was published before the death of Joseph Smith, Orson Hyde received a copy from Stephen A. Douglas while in Washington attempting at the instance of the Mormon prophet to get assistance for the migration of the Saints into Oregon. A copy was sent to Smith. See Roberts, Rise and Fall of Nauvoo, 263. This account of Fremont's was reprinted and incorporated with that of his explorations of 1843-44, and published in 1845. During the winter of 1845-46 while contemplating their departure from Nauvoo the leaders studied this report. (History of Brigham Young, MS., p. 308.)

(3) Bullock, Camp Journal No. 2, 1847, p. 58

Plans for much wider explorations began to take form in the spring of 1849, when the Twelve officially announced: "We hope soon to explore the valleys three hundred miles south, and also the country as far as the Gulf of California, with a view of settlement and a seaport."(1) Meanwhile examinations of possibilities nearer home were continued. The council sent men in May to determine the possibilities of Tooele valley for settlement and to select a site for salt manufacture. In late summer, exploration of Sanpete valley was undertaken. Colonies were established soon afterward both in Tooele and in Sanpete valleys. A group had already settled near Utah lake. Settlement was following close on exploration. Arrangements for the southern explorations were resumed in November. The purpose of this undertaking was stated to be to become acquainted with the history and geography of the areas visited and to select suitable locations for settlements.(2) As one reads the journal of this expedition in midwinter, one wonders why it was not undertaken during the summer months. Perhaps the necessities of providing food for the colonies made it inadvisable to release men until the crops were in. Care was taken to assure the success of the undertaking. Subscriptions were solicited at a public meeting to assist the enterprise and later aid was granted by the State (Deseret). The General Assembly meeting in December commissioned Parley P. Pratt to raise fifty men "to explore southern Utah to ascertain facilities to sustain population."(3) In its ten weeks of travel the company was subjected to great hardship from cold and exposure, and was greatly retarded in its progress by heavy snows. Nevertheless the

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(1) Epistle of Twelve to Orson Pratt, Journal History, MS., March 9, 1849.
(2) Third General Epistle, Millennial Star, Vol. XII, p. 141.
(3) Pratt, Parley P., Autobiography, p. 408

objects of the expedition were amply realized. It will be worth while to trace the route taken.(1) The party left Cottonwood, twelve miles south of Salt Lake City and followed well established trails to Sanpete valley, where Manti, the southern settlement, had just been established. They proceeded thence to the Sevier river and followed up the course of the stream through what is now Marysvale to the forks. Taking the southwest fork through Circle valley they spent five days finding a way out, finally reaching open country near the present site of Paragonah. Many of the oxen were now so worn-out that the majority made camp to rest while Pratt and nineteen men with the stronger animals pushed on southward over the rim of the Great Basin. They followed the Rio Virgin to its junction with the Santa Clara, and went far enough to the southward to confirm the report of the Indians that the country beyond was rugged and uninviting. They were very greatly impressed with the fact that though it was New Year's the buds of the trees were swelling. Day temperatures were delightful in contrast with the bitter weather they had often encountered earlier on the journey. Turning homeward they followed the Santa Clara along rich bottoms where Indians were producing good crops by irrigation, and ascending the rim of the Basin, came to Mountain Meadows. From this point to the Little Salt Lake, where they rejoined their main party, they passed great stretches of excellent pasture, mountains of iron, and forests of cedar. Meanwhile other members of the party had located supplies of pine timber, iron ore, freestone, limestone, and plaster of Paris. Returning to Salt Lake City by a different route they observed suitable sites

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(1) The official report of the expedition is found in the Journal History, MS., under the date of Nov. 25, 1849 ff.

for settlements at many points some to be colonized on Beaver Creek, Chalk Creek, and in Juab and Utah valleys.

In the search conducted by Mormon leaders for places suitable for settlement, Pratt's expedition stands out as of first importance, both because of its position in time and because of the many localities suitable for settlement that were noted. But it is by no means an isolated instance. In the Church annals are notices of many journeys of exploration motivated by the desire to discover lands that could be opened to settlement. Though details of such explorations have not always been recorded, a good deal of interesting matter could be assembled. But that would go beyond our present purpose.(1)

The knowledge gained by these pathfinders and explorers was gradual-

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(1) The following instances are noted by way of example: 1852, John D. Lee, leaving from Parowan in the Little Salt Lake, explored the valleys of the Rio Virgin and the Santa Clara. This led to the settlement of Harmony. (Journal History, Jan. 27, 1852); Gardner and associates explored carefully the Weber and Provo rivers, (Journal History, Sept. 13, 1852); 1858, Amasa M. Lyman organized a company to explore country south of Cedar City, (History of Beaver Stake, MS.,); White Mountain Expedition, under Wm. H. Dame, also known as Southern Exploring Company, engaged in seeking a place of refuge from the U. S. Army, (Journal History, April 25, 1858; also Sept. 21, 1858); Geo. W. Bean with party of six men was directed by George A. Smith to explore the Sevier River valley for irrigable land, (History of Sevier Stake, MS.); James T. Allred and company explored Circle valley. Settlement followed in 1864, (History of Panguitch Stake, MS.); John Steele conducted further explorations on the lower Virgin River, (Journal History, Jan. 8, 1863); 1865, Anson Call explored the Colorado River to find a landing place at the head of navigation, and to find places for settlement south of St. George, (Journal History, Jan. 3, 1865); 1872, Joseph A. Young and others explored the upper Sevier River, (Deseret News, July 29, 1872); Moses Thatcher and Wm. B. Preston explored the upper Salt River valley, (History of Star Valley Stake, MS.); Silas S. Smith led a party to the San Juan, to find place for settlement among the Indians, to preserve peace and serve as an outpost for protection of colonies north, (Utah Historical Quarterly, Vol. II, No. 1, pp. 8-11); Wm. C. Martindale explored southern Idaho, (Cassia Stake History, MS.); 1886, Chas. O. Card and two others were sent to explore lands north of the international boundary lines. Settlement followed in Alberta, (History of Alberta Stake, MS.).

ly augmented by later visits. Brigham Young himself was a frequent traveller and came to know at first hand many places that he subsequently designated for colonization. Thus he visited Sanpete valley in August, 1850, and noted on the journey several suitable sites. In 1852 he led a party of seventy-nine to the Rio Virgin. Returning he reports: "We found many fine valleys susceptible of sustaining large and dense population. So far as my observation extends, the natural wealth of this country consists of its rich pasturage; although its natural resources as yet are scantily developed."(1) The annals of the Church are replete with accounts of visits of Church leaders to the settlements and allusions are frequent to the location and suitability for settlement of lands encountered in the course of these journeys. Thus was accumulated a fund of information about the unsettled portions of the country that greatly aided and often determined the location of new settlements.

Close on the heels of exploration followed settlement. Geographically the movement may be described as a flow of population into the irrigable valleys of the mountains--moving from the Salt Lake valley southward as far as northern Mexico and northward into Canada, with occasional push to the east or the west within a much narrower range. Exceptions should be noted in the instances of two long thrusts to the west--San Bernardino, California, and Carson valley, Nevada, both of which were soon abandoned. During the first three decades (1847-77) Brigham Young was the guiding genius. But colonization continued for two decades under the direction of his successors.

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(1) Letter to Thos. L. Kane, Journal History, MS., May 29, 1852.

In the event that the reader is unfamiliar with the arid belt, it will be well for him to have in mind what was said about the geography of the region in the first chapter. Ninety-five per cent of the land is either mountainous or desert. The five per cent is made agriculturally productive by diversion of the limited supply of water for irrigation. Stream courses determined the location of settlements. The land of the villages and adjoining farms constituted man-made oases amid wide stretches of lands either wholly waste or suitable only for grazing. The Mormons set out to pre-empt all the accessible locations over an area as extensive as considerations of safety and available human resources would permit. They had come a long way to escape conflict with other settlers and they wanted every advantage incident to being first in taking up lands in the new country. Once well rooted in the Salt Lake valley they pushed outward with vigor. Though for fifty years they continued to plant colonies, the continuity of the movement was broken by Indian wars and trouble with the Federal government. At such times their offensive attack on their stubborn environment had to yield to the greater necessity of holding what they had already gained.

The first period of active colonization may be fixed within the period of 1847-58, from the arrival of the pioneers in Salt Lake valley to the culmination of the "Utah War."(1) The second period began with the return of peace and terminated with the outbreak of hostilities between the whites and the Indians under Blackhawk (1865). The third period terminates, or better, a fourth period begins when vigorous prosecution of polygamists drove many Church leaders into hiding and hastened the movement to found colonies

(1) The term Utah War or Mormon War is applied to a series of acts of resistance against the entrance of Federal troops into Utah under Albert Sidney Johnston, 1857-58.

beyond the international boundary lines.

The map opposite page 61 shows the location of the principal settlements of Utah and indicates the period, whether first, second, or third, when each community was founded.(1)

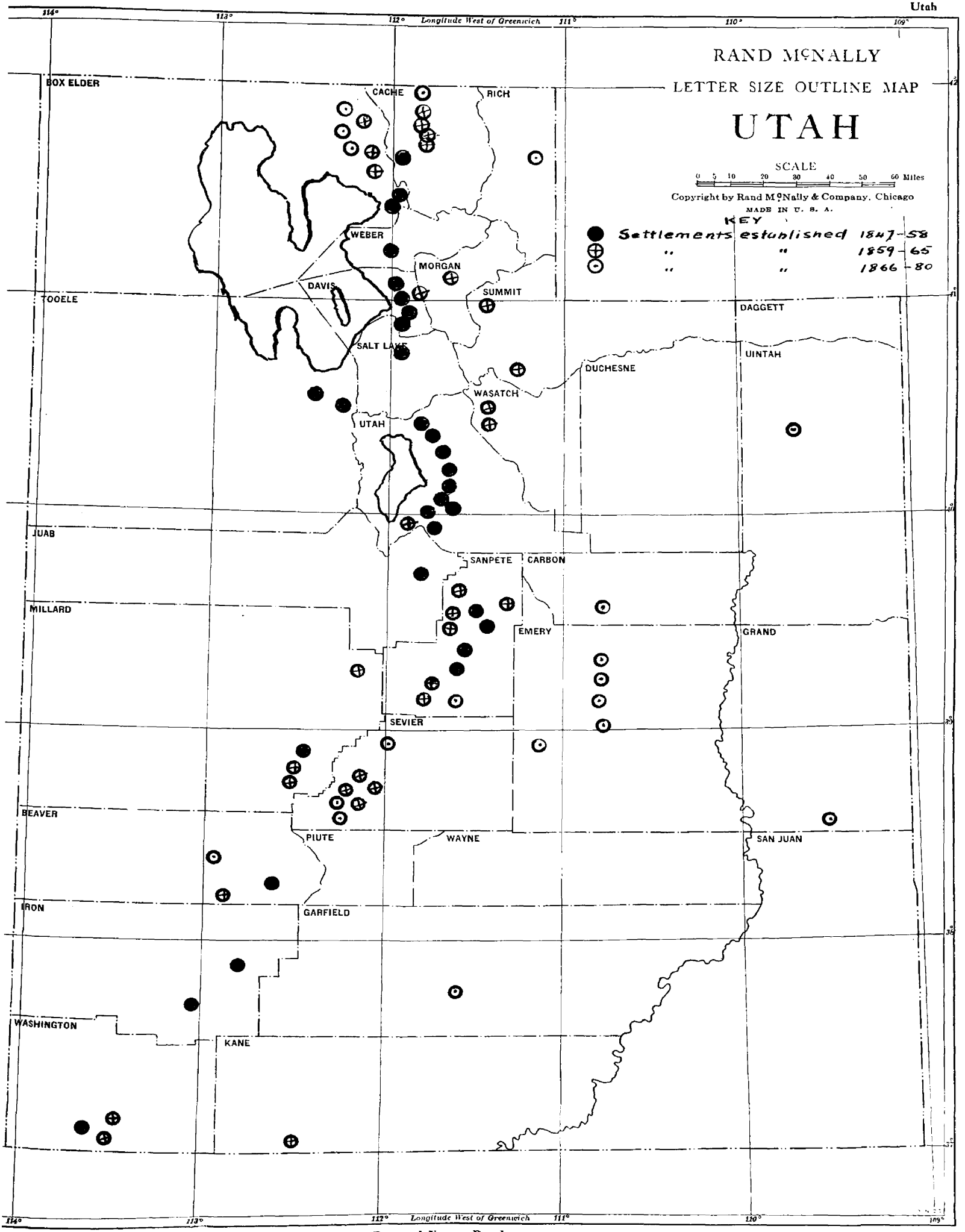
PERIOD I
1847-1858

The earliest settlements after Salt Lake City were not made in typical Mormon fashion by direct colonization, but merely as off-shoots from the parent center. Cattle herders attracted by the evident fertility of the alluvial soils, north of Salt Lake City moved their families in 1848 from the Pioneer Fort and established settlements in what is now Davis County. At the first census (1851) there were reported 1134 settlers in that county.

During the first winter in Utah, foundations were also laid for later settlement of the Ogden-Weber valley still farther north. White men had been more or less frequent visitors to the regions around the Great Salt Lake, before the arrival of the Mormons, and some hunters and trappers, no doubt, had lived there.(2) In 1847, Miles Goodyear had a farm and a habitation at the mouth of Ogden Canyon, and claimed twenty square miles made under a Mexican grant of 1841. This claim he sold to Captain James Brown for $1950 in Spanish doubloons, a part of the larger sum Brown had brought from San Francisco as pay for the Battalion boys. Brown and others moved to the place January 12, 1848.(3)

But these settlements though among the first made were not typical of what developed into a well established system. They represent the

(2) Utah Historical Quarterly, Vol. II (1929), No. 1, p. 14.
(1) Directed settlement was practically completed in Utah by the end of the third period.
(3) Journal History, MS., Jan. 12, 1848.



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gradual taking up of lands by individual location, which has characterized the drift of population westward throughout the history of America and the process by which the lands lying about and between established Utah settlements have, with the lapse of years, been occupied. The earliest examples of directed colonization outside the Salt Lake valley were those made in 1849 when hub settlements were made in Utah, Sanpete, and Tooele valleys. The first was that at Provo. Early in 1849 Brigham Young selected an experienced pioneer and about thirty families, fully equipped with tools, farming implements, seeds, and food supplies. For two years the colonists lived in a stockade similar to the fort that had first housed the settlers in the Salt Lake valley. Then a townsite was surveyed and individual allotments were made.

The hub colony for the opening up of Sanpete valley moved out from Salt Lake City late in October, 1849, settling upon Indian lands at the instances of a friendly Indian chieftain who had gone to Salt Lake to invite Brigham Young to send the white men to teach his people the arts of agriculture and of home building. The suitability of the valley for settlement was determined by a party of exploration who reported favorably. The leader selected was permitted in turn to select fifty families to make up the initial colony. Until 1851 when townsite surveys were completed so that individual holdings could be given the settlers, the settlers lived in dugouts and wagon boxes, holding out against heavy snows, severe cold, and a food crisis relieved by bringing in supplies on hand-drawn sleds.(1)

A third valley to be opened for settlement in the year 1849 was Tooele. The earliest settlers went individually and not by call of the

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(1) Third General Epistle, Millennial Star, Vol. XII, p. 243.

Church leaders. Early in 1850, however, they were organized under the presidency of one of the apostles and a common field was fenced and farms apportioned.(1)

The rapid increase in population during the year 1849 when about 4400 were added to the established colonies fired the imagination of Church leaders. It was the year of the gold rush when thousands passed through the Mormon colonies on their way to California, producing a profitable market for whatever of food, equipment, and draft animals the Saints could spare. Brigham Young and his associates with pardonable enthusiasm estimated the population at 15,000 and laid plans to bring in as many more the following season.(2) Though the increase of numbers fell considerably short there was considerable filling in about established settlements.

In 1851 an ambitious enterprise was undertaken in the settlement of San Bernardino in California Three purposes were to be served: (1) The new settlement was to serve as the seat of the Presidency of the Church in California.(3) (2) It was thought to offer an attractive gathering place for the Saints from the Pacific Islands and other places in tropical and semi-tropical climes, who might find the cold and altitude of the basin forbidding.(4) (3) It was considered a suitable way station for emigrants gathering to Utah via the Isthmus of Panama and the port of San Diego.(5) Though at first promising, the project proved a disappointment, both to the Church in Utah and to the settlers. Its early attractiveness made it necessary for the First Presidency to issue a warning to the Utah Saints

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(1) Utah Sketches, MS., Bancroft Library.
(2) Millennial Star, Vol. XIII, p. 51.
(3) Journal History, MS., February 23, 1851.
(4) Deseret News, Feb. 19, 1853.
(5) General Epistle, Millennial Star, Vol. XIII, p. 213.

against leaving to take up residence in the colony,[1] yet half of those who had joined in making the settlement were eager to return. By 1855 the project was insolvent, (2) and in 1857 it was officially abandoned.

Another project of immense anticipative importance to the Saints was the colonization of Little Salt Lake valley 270 miles south of Salt Lake City. Parley P. Pratt's exploring party had discovered extensive deposits of coal and iron ore in that vicinity. There was a great want of iron goods among the colonies. Why should not the Saints manufacture their own kettles, nails, plows, and other hardware, and avoid the long, expensive haul across the plains? Among the English emigrants the necessary skilled labor could be found; and so it was decided to establish two complementary communities, one agricultural to raise food and one industrial to mine coal and iron ore and operate the blast furnaces. The importance of the project justified the most influential leadership. A member of the Twelve was appointed to organize and establish the colonies. The company consisted of about 118 men, thirty of them with families, and included "nearly every man in the Valley who understood the working of coal and iron."[3] The company reached Little Salt Lake valley in the middle of January, 1851, and proceeded to build a stockade and a meeting house, and to apportion the land for planting. Two months later 1600 acres of land had been surveyed and 400 acres sown to wheat.[4] The village was named Parowan. The industrial village on Coal Creek seventeen miles south of Parowan, later named Cedar City, was founded in the fall of 1851 by a colony of sixty families, comprising the coal and iron workers. The village site was surveyed into fif-

(1) Journal History, MS., Feb. 19, 1853.
(2) Ibid., March 8, 1855.
(3) Millennial Star, Vol. XIII, pp. 106-07.
(4) Ibid, p239.

ty long blocks, each containing eighteen lots, eight by twelve rods. Thus provision was made for garden lots for 900 families.(1) Many of the early settlers, expecting to devote themselves exclusively to manufactures, selected no farm land whatever. To follow the struggles of this colony to realize its hopes would take us far afield. Let it suffice to say that though iron was produced in small amount and triumphantly displayed in Salt Lake City, commercial production was never achieved.(2) The colony became, like its sister colony Parowan, an agricultural and livestock center.

With the founding of Willard and Brigham City in that year the northern limits of settlement had been extended only sixty miles from Salt Lake City. In contrast colonies extended southward three hundred miles to the little settlement of Harmony, where soil and climate promised successful cotton and silk culture, and as far again to San Bernardino. Under these circumstances the location of Salt Lake City as the capital seemed inconsistent. Accordingly, President Young, now Governor of the recently organized territory of Utah, was authorized by the Territorial Legislature to appoint a commission to select a suitable site, centrally located for a capital city. The Commission located a site on Chalk Creek, to be known as Fillmore. A city was laid out, duplicating in dimensions Salt Lake City. Though it soon became a thriving village it was too far from the center of population to serve as the territorial capital. Only one session of the Legislature ever met there--the fifth annual session, December 10, 1855, by which time it had become apparent that Salt Lake City

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(1) Information supplied by Wm. R. Palmer, President of Parowan Stake.
(2) Remy, who visited Cedar City in 1855, reports a production of 2000 pounds of iron every twenty-four hours. Remy, Jules, and Brenchley, J., Journey to Great Salt Lake City, Vol. II, p. 363.

would be much the more convenient location for the seat of government.

Indian troubles (1853-54) and threats of the Federal government realized in the despatch of Johnston's Army to Utah (1857) retarded settlement and led to the abandonment of San Bernardino as stated above.

PERIOD II
1858-1865

The establishment of peace and the removal of the fear of Federal restriction was followed by a vigorous pushing out of the limits of settlement north and south. During the bloodless invasion new immigration had been shut off and there had been an actual contraction of the settled area by the withdrawal of the Saints from the more remote places. Now, however, many were impelled by rising land values and the full appropriation of easily available water courses to seek opportunity in new sections. Consequently there developed in 1859 and 1860 a veritable rush into Sanpete and Cache valleys. The latter had been first opened with the founding of Wellsville in 1856, previously mentioned; but this post had been deserted during the period of the army threat. In 1859 the settlers returned as part of the population stream that flowed into the area. Desirable locations were quickly taken. Twenty-six hundred people entered the valley within two years . After an interruption occasioned by disputes with Indians opposing the northern progress of population, (1862-63) the movement was continued across the Idaho line, with the settlement of the Bear lake country.

The movement of settlers into Sanpete valley was quite as rapid as that into "Cache." Opened much earlier than the latter, the growth of population had been steady over several years. Ephraim had been settled by a colony of fifteen families from Manti in 1854. It was the year when

'forting in' was general following the outbreak of trouble with the Indians. The Ephraim colony survived the Indian wars and the starvation years of 1855 and 1856. It was predominantly a Danish settlement and Danish methods prevailed. A visitor from Salt Lake City writes: "The system of agriculture around the fort presents rather a strange spectacle; there is scarcely a fence to be seen. Our Danish brethren take good care of their cattle, which seem to be very mannerly, for they never trespass over their 'reserved rights.'" (1) Other Sanpete settlements with beginnings antedating the Walker war are Mount Pleasant and Spring City, but the colonies were withdrawn during the Indian troubles and resettlement was deferred until 1859. In that year settlements were begun at Mount Pleasant, Spring City, Moroni, Fountain Green, Fairview and Wales. The latter colony, as the name indicates, gets its name from the nationality of its earliest settlers. Gunnison was founded in the following spring. In 1860 Sanpete valley had a population of 3,815.

Colonization of the Virgin River country--Utah's Dixie land--was vigorously resumed in 1861. The Mormon leaders had from the beginning aimed at economic independence. They found in Washington county climatic conditions apparently favorable to the production of cotton, tobacco, sugar cane, and silk. The outbreak of the Civil War in 1861 with its possible cutting off of the cotton supply impelled the Church leaders to push with vigor the settlement of the southern country. (2) A number of small settlements had already been made, Santa Clara in 1856, Washington in 1857, Heberville, an experimental cotton farm in 1858, and Virgin City in the same year. But

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(1) Journal History, MS., May 7, 1857.
(2) Adam, Frank, U.S.D.A., Experiment Stations, Bulletin, No. 124, p.210.

the number of settlers had been small. In the fall of 1861, three hundred families were called to go to the Washington country under the leadership of one of the Twelve Apostles. Brigham Young suggested the building of a city at the junction of the Santa Clara and the Virgin Rivers to be called St. George.

In the early 'sixties lands were also opened in Sevier and Circle valleys, south of Sanpete, with colonists from established centers in the nearest settled valleys. Indian attacks dislodged the new settlers, however, and the attempts to maintain settlements were abandoned until peace was firmly established.

PERIOD III
1865-1880.

By 1865 the principal valleys of Utah west of the line of the Wasatch mountains had been occupied and settlements had been made on every stream of importance near the point of emergence from the mountains. Another line of valleys west of the first had also been taken up. There were other favorable localities farther east but the mountains had served as an effective barrier to settlement. Up to the middle 'sixties no permanent settlement had been made outside Utah except those near the Idaho line. During the Indian wars of 1865 to 1872, it was quite inexpedient to attempt further colonial expansion. It was a heavy task to protect the settlements already existing. During the period the State found it necessary to call three thousand men to military duty.(1) Settlers were in constant fear of attack and had to exercise the greatest vigilance to protect their livestock and crops. Even so, there was much loss of life and property.

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(1) Young, Levi Edgar, The Founding of Utah, p. 290.

The cessation of hostilities gave the Church leaders opportunity to initiate new colonial activities. As has been seen, the march of settlements had been mainly southward; further advance in that direction would require the discovery of suitable lands south of the Colorado. The first attempt was made in 1873 by a group of over a hundred men and six women by Horton D. Haight under instructions of the First Presidency. Crossing at Lee's Ferry, the party pressed on to the Little Colorado, breaking the road as they went. From the place of encampment Haight conducted an eight-day exploring trip and returned with such discouraging reports that the whole colony returned to Utah.(1) For two years following the Mormons kept a small number of missionaries in the region at Moen Copie. In 1876, following another exploring expedition during the preceding winter, two hundred missionary colonists from many Mormon settlements assembled at Kanab, whence they departed in groups for the Little Colorado. Toward the end of March they made locations near Sunset Crossing and proceeded to plant their grain, operating according to the principles of the United Order (See above, pp. 8, 9) Only one of the settlements, the present St. Joseph, survived. Before surrendering, however, the colonists carried on a struggle with the erratic river that deserves to be commemorated in the annals of pioneer heroism. Later other locations were successfully developed. Mention may be made of Woodruff, Snowflake, and St. Johns.

Settlement of the Salt River valley in Arizona followed quickly upon the establishment of the colonies on the Little Colorado. A missionary party left Nephi in September 1875, and travelled by horseback through Arizona into Mexico, returning ten months later. A second missionary party spent the following winter in southern Arizona. These were shortly fol-

(1) McClintock, J.H., Mormon Settlement of Arizona, pp. 135-36.

lowed by a colonial expedition comprising eighty-three individuals. They established Lehi, now an Indian colony, but the majority of the party pushed on southward to the San Pedro and founded the settlement of St. David, which still later became the point of departure in establishing colonies in Mexico.

The death of Brigham Young, August 29, 1877, had no effect on the colonization movement unless to stimulate it. At the time Federal officials in Utah were inaugurating a vigorous attack on polygamy, emphasizing the desirability of new colonies at more remote points. Accordingly the year of the death of the great pioneer leader witnessed a considerable extension of Mormon boundaries.

The largest Mormon community in Arizona is Mesa. It was founded by Mormons from Bear Lake County, Idaho. In December 1877, the party made temporary camp in the valley of the Verde, at Beaver Head, while scouts went searching for a location. Attracted by the possibilities of an ancient canal, the new arrivals selected the present site of Mesa for their homes. Though there were only eighteen able-bodied men and boys in the colony, a dam was built and the old canal cleaned out. It was estimated at completion that the work cost $43,000 in money and labor at $1.50 a day. Water was available in about nine months, but there had to be much improvement of the canal later. The townsite duplicating the dimensions of Salt Lake City was laid out in May, 1878.

While these developments were taking place southward, population broke over a new mountain barrier east of Sanpete valley and took root in Castle valley, and a group of settlers established themselves in the Uinta Basin near the eastern limits of Utah territory. Manassa, Colorado, dates from the same year. The settlers in this instance were brought from among Mor-

mon converts in Georgia. Two years later Bluff in the southeastern part of Utah was established by settlers taken from Iron, Beaver, and Millard counties. About the same time the limits of settlement were extended northward into the upper Snake River valley in Idaho.

PERIOD IV
1880-1895

As has been stated, the extension of Mormon colonization beyond the international boundary lines, north and south, was hastened, if not directly caused, by the drive of the Federal government against the practice of polygamy. The account of the long years of strife in Utah between Mormons and non-Mormons--a repetition of the conflicts in Ohio, Missouri, and Illinois, with the difference that the advantage of numbers was now with the Mormons--has no place in this discussion except so far as it influences Church policy and achievement in regard to the colonial practice of the Church. In March, 1882, Congress passed the Edmunds Bill disfranchising polygamists, and a vigorous attack was made on important Church leaders that drove them into seclusion. Many prominent Mormons were convicted and imprisoned. It was decided to hasten the establishment of settlements near the Mexican border to serve as cities of refuge.

In December, 1884, President John Taylor apprised the stake presidents in Arizona of the peril of the polygamous brethren and urged them to hasten the colonization of northern Mexico. Some 'exiles' had already fled from Utah and were encamped south of the line. An agent was sent to acquire lands near Corralitos, Chihuahua, but was opposed by the acting governor who objected to Mormon settlement. The agent proceeded to the City of Mexico where he interviewed President Diaz and obtained his assurance that Mexico would welcome the Mormons. The objections of the of-

ficials at Chihuahua were withdrawn and the purchase of 20,000 acres at the site of Juarez, and 60,000 acres of timber lands in the mountains at Pachico was continued. These arrangements were not completed until 1886. Meanwhile the colonists had been going in from Utah and Arizona and living in temporary camps on rented lands. Settlements were made in 1886. In 1893 it was reported that there were five colonies in the state of Chihuahua with a combined population of 2,000.(1)

Two other groups of settlements, in Star Valley, Wyoming, and Alberta, Canada, were prompted by the anti-polygamy raids. Star Valley had been known to the Mormons for some time. A few families had gone into the valley in 1879, but active Mormon settlement did not begin until about 1885. In August, 1886, President John Taylor sent an exploring party to British Columbia with the view of establishing a colony outside the United States. After two months of travel the party found an attractive site in southern Alberta and selected a place for settlements. The first group of colonists, chiefly polygamists threatened with arrest, and their families, went to Cardston in the spring of 1887. In 1892, there were 81 families, comprising 420 individuals in the settlement. Several other settlements have since been made in Canada.

The period of colonization came to an end with the establishment of the Canadian settlements, because the motives that had prompted the movement had ceased to be vital and because of the exhaustion of the supply of lands that could be opened to settlement by the simple and inexpensive methods known to the Mormon pioneers. But the Mormon experience should be and has been found suggestive in carrying out the program of reclamation

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(1) History of Juarez Stake, MS.

adopted by the Federal Government in 1902. The Mormon system of land settlement will be described in the chapters that follow.

CHAPTER VI

SOCIAL FACTORS IN MORMON COLONIZATION

The experience of the last quarter of a century growing out of our federal and state reclamation projects has emphasized the importance of social factors in assuring the success of such undertakings. Though land be carefully selected and engineering details faultlessly carried out, though terms of purchase be reasonable as to amount, rate of interest, and time, it has been made evident that lack of leadership and of provision for educational, recreational, and religious activities, may greatly retard the development of a settlement project and result in disappointment to early purchasers.(1)

In this chapter we shall discuss the development of leadership and the selection and guidance of settlers as factors in the Mormon system of land settlement. In the first place it is essential to emphasize the importance of authority in the Mormon scheme, the strength of which lies in the conception of priesthood as the medium through which God directs the affairs of men. According to Mormon belief priesthood may be conferred on any worthy male member of the Church by any one upon whom it has been previously bestowed in its higher degrees. When an officer of the Church speaks with the authority of the priesthood, there is little likelihood that his words will be lightly regarded. This statement applies not alone to matters of the spirit but to ordinary mundane affairs.

It would be incorrect, however, to assume from these remarks that com-

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(1) Federal Reclamation by Irrigation, Senate Document 92, 68th Congress, 1st Session, 1924, pp. 100-101, 108-111.

munity affairs were dictatorially conducted. No Mormon leader though appointed by the authorities can hold office against the will of the people. Four times a year the names of all Mormon officials, general and local, are placed before the membership for sustaining vote. Though ordinarily the vote of confidence is unanimous there have been enough exceptions to show that the principle of common consent may operate to remove a man who has failed to satisfy his 'constituency.' A man may be removed whether by opposition of his people or upon the initiative of his presiding officer. In directing his group in new undertakings, such as digging irrigation ditches or constructing a fort, the local leader was careful to win the support of the group. The adult males were commonly called together to discuss the problem and to assist in making plans. The most convenient time to attend to such business was on Sunday in connection with the accustomed religious assemblies. Sometimes a special business meeting would be called to convene at the close of the assembly of worship, but Mormons have never been particular on this score, and frequently have attended to the business of making a living as though, quite consistently, it was a proper part of religious service. It is not uncommon, therefore, to discover in the recorded minutes of ward, stake, or general conferences, items indicating decisions to enclose a new field, maintain a cooperative herd, or levy a tax for the building of a road.

This encouragement of discussion in local meetings together with opportunity to hold minor positions in one of the several organizations of the priesthood gave to young men a type of training that served to develop qualities of leadership supplementary to but not less necessary than the aptitude for facing the sober facts of frontier life and turning them to account. Before he was given the important responsibility of founding a

settlement, a man had nearly always to prove himself in the school of experience. All of those assigned to colonization enterprises in Utah during the first two decades had achieved more or less prominence in the pioneering activities of the Church in Missouri and Illinois. These local leaders invariably became the bishops of their respective colonies. Sometimes they were set apart to that office before the nucleus group left the Salt Lake valley. If not, the settlement was shortly visited by Brigham Young or by one of the Twelve Apostles who organized the group by the appointment of a bishop, who in turn selected the other officers. As colonies multiplied about the first or hub colony the bishop, if of large enough calibre, would probably be appointed president of a stake comprising several settlements, each of which was ecclesiastically organized under the direction of its bishop.

In the most active period of Church colonization the areas selected for settlement were divided into very large divisions territorially speaking and the labor of settlement according to a stated policy was directed by apostles.(1) These were second in authority only to the president of the Church. Thus one of the apostles was placed in charge of the southern settlements (Utah's Dixie); another presided for a time over the settlements in the Little Salt Lake valley; two jointly undertook to establish settlements in southern California; one of whom after the abandonment of this far-flung attempt, assumed charge of the settlement of the Bear lake country near the Utah-Idaho line. Other instances could be cited. Among them were provincial rulers of no mean ability, men of sufficient mental and spiritual stature to have carried on in large degree the work that was

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(1) Tenth General Epistle, Millennial Star, Vol. XVI, p. 19.

actually performed by Brigham Young.

A biographer of Young has said:

> "It is my conviction that without Brigham Young the Mormons would never have been important after the first few years of their institutional life, but without the Mormons Brigham Young might have been a great man. He was the sturdy character among the leaders of the Mormon movement, and it is due to his personality rather than to any other factor that Mormonism developed into a wide-spread creed and an extraordinary economic organization." (1)

Werner is mistaken in believing that the system was wholly dependent for its development upon Brigham Young. He dominated; but there were other 'giants' in those days, whose activities in community building warrant the belief that the colonizing activities would have gone on in much the same way without the great leader. It has been shown in earlier chapters that social conflict in Missouri and Illinois, and the pull of western migration generally gave the impetus toward the West, and there is evidence that only the death of Joseph Smith prevented his leading the westward movement. (2) It is conceivable that the removal of Brigham Young at a critical moment might have altered the course of Mormon history. The point is not worth debating. Certain it is that others of the Twelve developed great powers of colonial leadership and rose to whatever measures of responsibility devolved upon them. Being subordinate in the Mormon system to Brigham Young they became very important aids to him in building the Mormon commonwealth.

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(1) Werner, History of Brigham Young, Preface.

(2) That Smith foresaw the inevitableness of the western migration is indicated by an entry in his journal.

> "I prophesied that the Saints would continue to suffer much affliction, and would be driven to the Rocky Mountains. Many would apostatize; others would be put to death by our persecutors, or lose their lives in consequence of exposure or disease; and some of you will live to go and assist in making settlements and build cities, and see the Saints become a mighty people in the midst of the Rocky Mountains." (Joseph Smith, History of the Church, 1909, Vol. V, p. 85.)

Brigham Young has so far occupied the center of the picture as to obscure the substantial service of those associated with him and to lead even careful observers to attribute too much to his practical genius. He fell heir to a system the details of which had been pretty well worked out in the life time of Joseph Smith, under whose direction Brigham Young, Heber C. Kimball, and other prominent Mormon leaders of the exodus acquired the experience in administration that assured their subsequent success. Many elements of the Mormon system of colonization that have been attributed to Brigham Young originated with the Prophet. He, as we have seen, was responsible for the square blocks and wide streets of the typical Mormon city. He arranged for the purchase of the lands upon which the city of Nauvoo was built, and at first directed the allotment of city and farming lands. He originated the policy of gathering the Saints and sent his associates to open missions in Canada, England, and various parts of the United States, from which places thousands were brought to strengthen the body of the Church and to augment the population of Mormon communities. Brigham Young carried on where Joseph Smith left off and when the former passed away the work of settlement went on as it had proceeded under his own direction. Brigham Young had great administrative faculties. Though he did not create the instrument of organization through which he accomplished his great tasks, he had the talent to make the most of it. The lines of authority led from his hands, through the hands of divisional leaders, to the most remote settlement. Thus careful attention to detail and genuine solicitude on the part of leaders for the welfare of their people went far to assure the success of Mormon colonial enterprise.

A proper understanding of Mormon methods of land settlement requires that we know something of the people themselves--their numbers, charac-

teristics, and general fitness for the tasks of opening up new lands. The enumeration for the first Utah census, published as of 1850, was made in April, 1851.(1) The population of that date was 11,380. With due allowance for births and deaths this is the sum of the migration for four years. Just under 1700 people remained in the Salt Lake valley during the winter of 1847-48.(2) The Mormon migration of the following year (1849) was augmented by a large number of gold-seekers, estimated by a contemporary Church official at 3000,(3) who were impelled by necessity or prompted by other considerations, to cast their lot with the Saints. The Church historian reports 1400 in the five companies of emigrants(4) so that the season's increase in numbers amounted to well over four thousand. It was in this year that the planting of colonies began as previously described and a more vigorous search for available lands undertaken. In 1850 there were additional arrivals of about 2500. Immigration must have continued at about the rate of 1850 throughout the next decade, for the total population for Utah at the Census of 1860 was 40,273. There was an absolute increase of 46,513 or 115 per cent in the decade of the sixties and of 57,117 or 66 per cent in the decade of the seventies. Rapid as was this increase in population it was not extraordinary when viewed in the light of the great western migration of which it was a phase. In absolute numbers the growth in Utah during the decade of the fifties was exceeded by that of four other far western states: Colorado, New Mexico, Oregon, and California, but in the next decade Utah's growth was surpassed by that of three other

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(1) Whitney, Orson F., History of Utah, Vol. I, pp. 445, 457
(2) See Appendix for additional details.
(3) Wilford Woodruff in Millennial Star, Vol. XI, p. 344.
(4) Jenson, Andrew, Church Chronology, 2d ed., p. 36.

states: California, Colorado, and Oregon. Nevertheless, there are considerations that give the Utah movement exceptional if not unique interest. The principal of these is, of course, the systematic colonization of newcomers and the fact that they came in family units, as will be shown shortly.

But first we shall inquire concerning their geographic origins. The Church was proselytizing intensively in Europe as well as in eastern and southern United States and large numbers of converts were being brought in from English speaking and Scandinavian countries. But the total influx of those of foreign birth, was not proportionately as high as in the case of California. Among all the states and territories in 1850 California, New York, Wisconsin, and Minnesota had higher proportions of foreign-born than did Utah. Ten years later despite the large increase in the proportion of foreign-born in Utah, several states showed larger relative numbers: California, Minnesota, Wisconsin, and the Dakotas. In 1870 Utah's proportion was exceeded in California, Idaho, Nevada, Arizona, Wyoming, Montana, and Minnesota.(1) About one-third of Utah's population during the period which claims our interest were foreign born.(2) Of these about two-thirds came from the British Isles. Denmark and Sweden were also important sources.

Of the two-thirds of the people of Utah that were born in the United States, by far the larger proportion came from states north of the Ohio. From fifty to sixty per cent of the native stock came from five states: New York, Illinois, Iowa, Ohio, and Pennsylvania. Outside of these the most significant contributions were from Missouri, Kentucky, and Tennessee, and of these the Missourians were partly the children of northern stock

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(1) Compendium of the Eleventh Census 1890, Part 1, xxxlx.
(2) See Table IV of Appendix. II

representing the early migrations of the Church from New York and Ohio. If we were to trace the sources farther back we would find that New England was the original home of many of these Utah pioneer families.

Perhaps the most significant characteristic of the early population of Utah is the proportion of the sexes. Settlers in Utah had come in family units to establish permanent homes. Their economy was distinctly agricultural. On the contrary adventure and the quest of fortune were the motives that attracted the earlier settlers in most other far western states. Referring to the proportion of males and females in the Western Division, the Census says: "In 1890 the least proportion of males in all these states and territories was in the case of Utah, where 53.13 per cent were of that sex, and the largest proportion of males was in Montana, where they out-numbered the females in the proportion of 2 to 1. Considering these states and territories as regards extreme cases of disproportion between the sexes, it is seen that the population of Colorado in 1860 was composed of 95.37 per cent of males; that the population of Nevada in the same year was composed of 89.50 per cent of males, and that California in 1850, in the height of the gold excitement, contained only 7.58 per cent of women."(1) For the entire Western Division including Utah the number of females to each 100 males in 1850 was 37, while in Utah alone it was 88. A decade later the proportions had risen to 51 and 99 respectively. In the absolute figures there is a striking equality in the increase in the number of males and females in Utah up to 1870. After that year, due perhaps to the growth of the mining industry, there is a notable excess of males.(2) The large proportion of children in the Utah figures emphasizes the point we have been developing. The ratio of children under

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(1) Compendium of the Eleventh Census, 1890, Part 1, lxxx.
(2) Consult Table VII in Appendix II.

five years of age to the entire population is ten times as high in Utah as in California according to the Census of 1850.(1)

In the matter of intellectual attainment Mormons have been charged with a vast amount of ignorance by some writers and accredited with a good deal of wisdom by others. That they were drawn from among the poor of the earth there is no doubt. Even in their wanderings, however, and amid all the hardships of pioneer life, they had regard for schooling and set up schools whenever conditions would permit. Census data for 1880 enable us to make some comparisons as to degree of illiteracy. Of all white persons for the whole United States ten years of age and over, 9.4 per cent were unable to write. In Utah 8.5 per cent were so reported. But the figure applies to all the population of the state. There is no way of knowing what the comparable percentage would be for Mormons alone. It is believed it would be lower. At any rate, such a conclusion is indicated by an analysis of the data on illiteracy for 1920 by Harris and Butt, which shows that the counties having the highest percentage of Mormons have the lowest proportion of illiteracy.(2) In 1920 only eight states had a lower percentage of total illiterates than Utah. But this aids us but little in knowing how the early settlers of Utah would have compared with those in other states or in the country as a whole. We shall be near the truth if we suppose that they were just an assortment of the people one would expect to find on the frontier in the middle of the last century or in the factory towns of England.

The other closely related characteristics of the Mormon people need

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(1) Compendium of Seventh Census, Table XX, pp. 52-53. See Appendix II, Table 8.
(2) Harris & Butt, Fruits of Mormonism, pp. 20-21.

to be observed. These were their willingness to follow leadership and their willingness to work together for common ends. The period that saw the inception of Mormonism was one of considerable communistic and co-operative activity. The great economic distress of the middle decades of the nineteenth century prepared the soil for the planting of the seeds sown by Mormon missionaries, who combined with the promise of eternal salvation the hope of improved temporal circumstances. Converts to the Church accepted the principle of obedience to authority. Though they were not always uncomplaining they were in general compliant to the wishes of their leaders. Adherents to the faith were predisposed to submerge individual to group interest. Theoretically, they had accepted the law of consecration, (See page 8) and though in practice they fell short of this difficult standard of self-abnegation, they were generally responsive to the law of tithing and to other demands for supporting group interests at considerable sacrifice of time and means.

From the point of view of their general fitness for the tasks of subduing the desert, the Mormon rank and file were by no means a select group. Much is said nowadays about the necessity of choosing those who have farming skill and some capital for settling federal and state lands under reclamation projects. Many of the Mormons had neither. It is true that there was a large initial migration and a fortunate admixture among the annual arrivals of experienced farmers, some of whom had made farms from virgin soil two or three times during their repeated dislodgments before reaching Utah. Full use was made of this experience. But thousands of those who joined the Saints were entirely ignorant of the arts of agriculture. This is especially true of the English immigrants, who numbered about a fourth of the annual increase for many years. Of the occupations

of these we have indicative information. Of 2,282 emigrants from the British Isles of states occupations, 173 were farmers, gardeners, and shepherds; about ten per cent were miners; the rest were factory hands, artisans and shop-keepers.(1) Moreover, it is to be remembered that new agricultural techniques had to be experimentally developed, so that much of the training of those who understood farming methods as applied in humid climates was of limited application in arid regions.

To whatever skill the Mormon did or did not possess for opening up new land, he added little or nothing by way of capital. Brigham Young was fond of saying that capital consisted wholly of the bone and sinew of working men and women.(2) Certainly that was the chief form in which it was carried to Utah. At first a good outfit for crossing the plains and a year's supply of food was insisted upon.(3) Ordinarily there was a wagon and tent for each ten persons, with two yoke of oxen, one or two milk cows, and a horse or two.(4) The well-to-do were better equipped. There is record of an outfit consisting of three wagons; one carrying farming implements, tools, and a stove, was pulled by two yoke of oxen; a second, drawn by two cows carried provisions; and the third, drawn by horses, sheltered the family.(5) On the other hand there were many in 1855 and 1856 whose entire family stock of provisions and equipment were carried in a hand-cart. By that time the established settlers were producing in normal

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(1) Linforth, James, Liverpool to Salt Lake, pp. 16-17.
(2) Journal of Discourses, Vol. 16, p. 66.
(3) Johnathan C. Wright Reports that the Examining Committee in 1849 turned him back at the Kanesville Ferry, because he lacked a yoke of oxen. He didn't get away until the next year. (Letter of April 23, 1850 on file in Church Office; quoted in the Journal History, MS.)
(4) Johnson, Don Carlos, History of Springville, p. 5.
(5) Ibid, p. 5.

years surplus food so that the earlier requirements had been relaxed.

Indeed there were so many in the British Isles eager though lacking the means to emigrate, and the Church leaders were so zealous for the increase of their people that a system of extending financial aid to emigrants was put into operation. The idea was conceived by Church leaders in the fall of 1849 and took corporate form by action of the General Assembly of the State of Deseret in September, 1850. This action was subsequently confirmed by the legislature of Utah territory. Under the act of incorporation the management of the Perpetual Emigrating Fund was placed in the hands of a board, consisting of a president and not fewer than twelve assistants, to be approved by a majority vote of a general or special conference of the Church. Vacancies in the board were to be filled by appointment of the Church Presidency.

The company had three prospective sources of income, voluntary contributions, interest on loans, and increments resulting from the sale of company property. Only the first source proved to be substantial. Nevertheless, the fund grew--on paper at least--to large proportions. Donations were received in grain, cattle, wearing apparel, jewelry, labor, cash, or anything convertible. The General Assembly set aside Antelope and Stansbury's Islands in the Great Salt Lake as herd grounds for the company's stock. One of the earliest records shows that the amount subscribed in Deseret in 1849 equalled $5,856.60.(1) This was entrusted to Edward Hunter and expended in bringing poor Saints from Iowa in 1850 in fulfillment of a pledge made in the Nauvoo Temple in 1845. Contributions in the British Mission by July 1854 equalled 6832 pounds.(2) Of

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(1) P.E.F. Record Book for 1849-50-51-52, Historian's Office.
(2) Linforth, James, Liverpool to Salt Lake, p. 9.

the total amount expended during the life of the fund we have no complete information. As early as 1869 it was placed by a non-Mormon writer who implies at least that his information was direct at five million dollars.(1) As the fund was turned over several times the principal amount donated was, of course, much less than the total of advances.

The magnitude of the assistance given may be judged from the number of immigrants brought in by the fund. For the British Isles we have accurate information. During the three years 1852, 1853, and 1854 the total Mormon emigration from the islands was 5,078. Of this number 1724 persons were carried at the expense of the fund at a cost of from ten to thirteen pounds apiece. In the following year 1161 of a total of 4647 travelled at the expense of the fund.(2) In addition considerable assistance was given to Scandinavian and German emigrants. Owing to failure to discriminate in later tabulations it is impossible to determine the the number assisted by the fund. During the period 1856 to 1887, when the company was dissolved there is record of the immigration from Europe to Utah of 63,309. It is known that a great many of these received assistance.(3)

The plan of operation was simple. Donations were converted into cash and used by the agent in paying the expenses of the beneficiary from the point of departure to the Salt Lake valley. Every attempt was made to reduce expenses to a minimum. All arrangements were made and paid for by the agents. Experience had shown that the per capita cost of the company from Liverpool to Salt Lake when each family shifted largely for itself

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(1) Todd, Reverend John D. D., The Sunset Trail. Boston 1870.
(2) Linforth, James, Liverpool to Great Salt Lake. p. 15, 120
(3) Larson, M. P. Perpetual Emigrating Fund, MS., p. 129

was twenty pounds. Under the management of the fund agents the cost was reduced to from ten to thirteen pounds.(1) Those shipped at fund expense were designated by friends in Utah who paid the passage money to the fund in Salt Lake City, or they were chosen from among all applicants by the Church agent in England. In consideration of the advance of expenses the beneficiary signed an agreement to hold his time and labor subject to the appropriation of the Company until the advance was repaid. The directors of the fund in Salt Lake City assisted the newly arrived immigrants to find employment. Many were assigned to labor on enterprises of a public nature such as the erection of buildings, the construction of the wall around the Temple Square, and the construction of a railroad to the rock-quarries. Many worked for contractors engaged in the construction of the Union Pacific railroad and turned over their surplus earnings to the fund.

Nevertheless losses were heavy. Both the ability and integrity of many of the beneficiaries of the plan were greatly overestimated. By 1855 indebtedness to the fund was $56,000 and the president of the company was threatening legal procedure.(2) In 1880 the amount owing to the fund on principal account was $704,000, and accumulated interest at ten per cent equalled $900,000 making a total of $1,604,000. As the year 1880 was the fiftieth or Jubilee year of the Church the ancient Israelitish custom of cancelling debts was followed to clear the books and the consciences of hundreds of debtors. On the recommendation of the bishops worthy poor were thus relieved to the extent of one half the book amount of the entire debt.(3) Most of the remainder was eventually lost. When placed in receivership in

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(1) Linforth, James, Liverpool to Great Salt Lake, p. 12.
(2) Larson, Perpetual Emigrating Fund, p. 126.
(3) Proceedings of the Fiftieth Annual Conference, 1880.

1887 the company had nominal assets of $417,968: principally in uncollectible promissory notes.(1) The failure of the fund is not surprising when the ability of those that borrowed from it is taken into account. The beneficiaries were the poorest kind of risks. Their poverty constituted their chief claim to assistance. Those who had means, or were smart enough to get them were not expected to rely upon the fund.

Despite the financial failure of the fund its benefits were not inconsiderable. Through its operations the pledge to redeem the poor who had been driven from Nauvoo was fulfilled, and hundreds of others were brought from foreign lands where they lacked both incentive and opportunity into an environment that evoked the highest endeavors of which they were capable and rewarded them in time with substantial improvement in their material and social circumstances.

There were no comparable advances of means to assist settlers in developing their lands. The latter they could have for the taking. If they had strong backs and a desire to get on, they were as well equipped as their predecessors had been.(2) In many other ways however, the Church

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(1) Larson, Perpetual Emigrating Fund, p. 169.

(2) Occasionally, however, a colony fell into such dire straits that direct financial assistance was necessary. Undoubtedly the Church has assisted many colonial enterprises with means. A few instances that have come to my attention may be regarded as typical. In promoting the Arizona settlements in 1877, the Church sent over ten thousand dollars worth of equipment, (Journal History, MS., Dec. 11,1877); the emigrants from the South who were established at Manassa, Colorado, were given small cash contributions for seed grain and implements. A Church agent assisted in making arrangements for the purchase of lands at $1.26 an acre, from the State of Colorado, but payments were raised by the colonists, (History of San Luis Stake, MS.); cash contributions of $1,000 and $150 to assist in constructing a dam at Snowflake were made in 1884. In 1890 $300, chiefly in produce, was given for the same purpose, (History of Snowflake Stake, MS.); and furnished most of 770 heads of cattle traded for land claims at St. Johns, Arizona, (McClintock, T. H., Mormon Settlement in Arizona, p. 179).

greatly assisted in the process of land settlement. In the first place a great deal of care was exercised to give a new settlement a successful beginning. We have seen that locations for settlement were carefully predetermined. The membership of the nucleus colony was also selected. A leader was appointed and given the authority to select fifty families, more or less, to go with him, as in the settlement of Sanpete valley under Isaac Morley, or the membership of the entire initial colony was designated by the president of the Church. Care was taken to select representatives from essential trades so that the colony could have the benefit of whatever mechanical and agricultural skill was available.(1)

After a colony became established, it ceased to be necessary and it was not customary, to continue to designate those who should join it. For most of those arriving in Salt Lake City, there was a good deal of latitude in choosing a location. Many, of course, followed friends, or settled with fellow-countrymen. Thus Sanpete county was settled mainly by Scandinavians. The village Wales was an exclusively Welsh colony.

Labor was invariably economized in the earliest years of a settlement by cooperation. The plow land was enclosed within a common fence and the first houses were built as part of or within the fort. Thus the colony lived very much as a single family until the first and sometimes the second season's grain was harvested. When augmented numbers and an assured food supply made possible the taking up of individual holdings, the land was surveyed and the settler received his garden plot and farm lands.

(1) A tabulation of trades and occupations represented in the initial 'Dixie' colony gives results as follows: farmers 102, carpenters and joiners 8, masons 6, painters 3, tailors 4, shoemakers 3, silk-weaver 1, cabinet-makers 2, wagon-maker 1, mill wright 1, millers 2, surveyor 1, printers 3, all others including nine listed as laborers 34, total 175. Compiled from History of St. George Stake, MS., Oct. 1, 1861.

But he was never without the benefits of the counsel of his leaders, the chance to discuss his problems with his neighbors, and the stimulation of friendly rivalry. At the weekly Sunday Meetings, whenever desirable, the bishop or a visiting stake president advised the people on any or all topics that seemed to bear upon the success of the settlement. Thus the ideas of the most able men in Mormondom were made available to the lowliest gardener or farmer.(1) As often as possible one of the authorities from Salt Lake, an apostle or Brigham Young himself, would tour the colonies, making addresses and giving counsel in all principal communities. The general conferences of the Church held semi-annually in Salt Lake City also gave occasion for much practical advice to the Saints who came from far and near for the meetings. The Deseret News, esteemed as of oracular authority, carried frequent editorials and correspondence on agricultural and economic problems of local importance.

Among the educational aids none were of greater significance than the societies organized for the promotion of agriculture and domestic industry. There is record of the organization of a horticultural society in Salt Lake in 1855.(2) In January following the Deseret Agricultural and Manufacturing Society, under the direction of which annual fairs have been and still are held, was incorporated. Local organizations of a similar nature soon appeared wherever there were settlements of suffieient size and number to warrant.(3)

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(1) "Some of the most practical and best informed men in the community were called to deliver free lectures on farming, stock raising, etc., for many of the people had come from manufacturing centers and had no experience in agricultural life." Brown, James S., Life of the Pioneer, page 126.

(2) Journal History, MS., Sept. 13, 1855.

(3) The movement was country-wide. According to Faulkner, the U. S. Patent Office (1858) published a list of 900 such societies. (American Economic History, p. 238).

Stimulation to good works sometimes went further than mere encouragement as the following observation of a non-Mormon visitor shows:

> "Before the religious ceremony commenced, five men mounted the rostrum, who were, as I learned, the weekly committee of inspection. The chairman read his general report of the prospects and proceedings of the colony, and then read a list of those deserving of particular commendation for their husbandry. The extent of their fencing, and other improvements, which was followed by the black list, enumerating the idle, slothful, and unimproving portion of the community, who were held up to reprobation, and threatened in default of certain tasks allotted them being finished at the next visit to be deprived of their lots, and expelled (from) community. The reading of these lists produced an evident sensation, and, I am satisfied, stimulated the industrious to extra exertion, and goaded the lazy to work in self-defence." (1)

What has been said of the Mormon system of colonization may now be briefly summarized. In realizing their plan to build a strong Mormon state or commonwealth, the Church leaders systematically explored the country to locate and select suitable lands for settlement, that is, lands of promising fertility and slope in such association with water that irrigation was feasible. Every colony was directed by a man chosen by Church officials for his experience, wisdom, and ability to command the respect of his following, whose power was magnified by his promotion in the priesthood, for which the rank and file had the greatest esteem. The earliest colonists, who were to win a foothold on the land against the opposition of Indians and the obstacles inherent in place and condition were selected, with due regard to the proportion of industrial and agricultural workers, by the local leader himself or by general Church authority from among the immigrants who, under the encouragement and aid of the Church, were seasonally arriving in the Salt Lake valley at the rate of 2500 a year. Though no di-

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(1) Kelly, Wm. An Excursion to California, p. 228.

rect financial aid was available to settlers on the land, and though they were lacking in capital, their labors were carefully supervised by the local leader (bishop), and by higher officials who made frequent visits to the settlements. There was the closest kind of cooperation, amounting to practical communism, in the earliest years of a settlement, but as soon as conditions warranted, the land was apportioned to the heads of families. Through the press and the pulpit, by the praise or adverse criticism of committees of inspection, and by means of annual exhibits, the arts of production were stimulated.

CHAPTER VII

LAND TENURE

According to the ideal plan for the settlement of the Saints, which Joseph Smith sent to the leaders of the branch in Missouri in 1833,(1) farmers and their families were to live in the village or town and till the lands lying beyond the residential limits. Though realisation of the plan was thwarted by the inability of the Mormons to get on with their neighbors in Missouri and Illinois, it was carried to the far West by the pioneers and became the pattern for all their settlements in the Rocky Mountain area.

The economic disadvantages of this system were outweighed by the protection afforded and the social advantages of close settlement. The need of protection against Indians was obvious and gruesome reminders came often enough to convince the most daring and forgetful. In the earliest years of a settlement, the colonists huddled together in a walled enclosure or fort, and moved on to the village lots when the number of settlers became sufficient to hold the savages in check. The Indians came to know the Mormons as friendly but wary and prepared. "Feed them rather than fight them," was Brigham Young's advice; the settlers had to do much of both. Even though the need of protection from savage foes had been lacking, the Mormon system would have required the farm-village type of settlement. Frequent meetings were essential. The New England town-meeting was reproduced in early Utah for the conduct of civil affairs. The clustering of

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(1) See above, p. 14.

habitations around the church hall greatly facilitated assembly for the consideration of common problems. There were recreational advantages. There were educational advantages for the children, an early and constant concern in every Mormon village. But most important of all was the religious motive. Group worship was an essential in the lives of these people, who like the Puritans, had isolated themselves to gain the cherished right of communion according to their own ideas.

Even though the laity may not always have been aware of the need of close community life, their leaders were alert to its importance. The following letter by the presidency of the Church, though written to guide the leaders of some of the later colonies, clearly states the general policy:(1)

> "That you may more fully understand our wishes with regard to the organization of new settlements throughout your Stake, more especially in the distant and most thinly settled parts, we address you this communication.
>
> In the first place, it would be well, in all cases where possible, for yourselves, or the bishop of the ward to which the parties belong, to have a knowledge of the intention of those in your Stake removing to the new settlements, as to the district in which they intend to locate, so that you may give them any necessary council and information, and also have an understanding where they may be found, that they may not stray off and be lost sight of. It is also expected that parties coming in from other Stakes will comply with these regulations which it will become the duty of presiding Bishoprics to see carried out. In all cases in making new settlements the Saints should be advised to gather together in villages, as has been our custom from the time of our earliest settlement in these mountain valleys. The advantages of this plan, instead of carelessly scattering out over a wide extent of country, are many and obvious to all those who have a desire to serve the Lord. By this means the people can retain their ecclesiastical organizations, have regular meetings of the quorums of the Priesthood and establish and maintain day and Sunday schools, Improvement Associations, and Relief Societies. They can also cooperate

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(1) History of Fremont Stake, MS., Letter of Dec. 26, 1882.

> for the good of all in financial and secular matters, in making ditches, fencing fields, building bridges and other necessary improvements. Further than this they are a mutual protection and source of strength against horse and cattle thieves, land jumpers, etc., and against hostile Indians, should there be any, while their compact organization gives them many advantages of a social and civil character which might be lost, misapplied or frittered away by spreading out so thinly that inter-communication is difficult, dangerous, inconvenient, or expensive. It would be well, therefore, for you in company with Brother Ricks to visit the country and make such locations of settlements as may be desirable and as the circumstances may require, and have your town lots surveyed by a competent person and such arrangements made for this kind of settlement as you and your counsel and Brother Ricks may deem advisable. In doing this, however, it would be well not to interfere with homestead entries, or to embarrass new settlers too much, but to have it positively understood that this method must be adopted in your settlements. We know of no reason why the methods that have been pursued in the past on these matters are any less applicable to the Saints in Idaho and Wyoming than they have proved to those in Utah and Arizona. While the families are gathered in settlements there can be no disadvantage in having the farms outside, within easy reach, as the peculiarities of the country may admit, the same as in our older settlements. A spirit to spread far and wide out of sight and reach of the authorities of the Church, must be discountenanced, as all Latter-day Saints must yield obedience to the laws of the Gospel and the order of the Kingdom of God, and a methodical comprehension and intelligent system be inaugurated that we may gain influence (and not lose strength) by strengthening the cords of the Stakes of Zion. Care must be taken that the interests of the Indians on their reservations, water claims or otherwise, are not interfered with, but they must be guarded and protected in all their rights, the same as the white man. In all cases a friendly and a brotherly disposition should be nourished towards the Lamanites, (1) who will be our friends if we do not repulse them.

Several considerations committed the Church to the policy of apportioning the plow lands into small holdings. The farm-village type itself imposes limits of distance and hence of size of farms. Brigham Young planned to locate villages at distances of ten miles, thus fixing the limit of distance for the most remote farms at about five miles from the

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(1) The word "Lamanites", taken from the Book of Mormon is synonymous with "Indians."

homes of those who tilled them. There were other economies associated with small holdings that became evident to the leaders in their earliest experience in the Salt Lake valley. These had to do with the provision of fencing and of water for irrigation. In Table I the first applications for land are set opposite the apportionments decided upon by the Church leaders. It will be noted that no provision is made in the decision of February, 1849 for holdings larger than ten acres. This gave practically every man a holding near the city and made it possible to provide fence and water with reasonable despatch. One of the earliest decisions reached by the colony had been to enclose lands jointly. This example was followed in practically all later settlements. It became an established rule that a man must contribute labor both on the fence and on the ditch in proportion to the area of his land to be benefitted. This limitation served as an effective bar to anyone's appropriating more land than he had immediate use for. Thus at

Table I

Applications October 2, 1848.(2)			Decision of February 17, 1849.(3)		
	No.	Total A.		No.	Total A.
5-A	240	1200	5-A	460	2300
10-A	335	3350	10-A	291	2910
15-A	8	120	Church Farm		800
20-A	153	3060	Fractional lots		17
40-A	32	1280			
80-A	8	640			
	776	9650			6027
		640			
		10290			

Comparison of division of the Big Field as decided upon February 17, 1849, with applications of preceding October.

(2) Journal History, MS., October 2, 1848.
(3) Journal History, MS., February 17, 1849.

first it was economy of labor that limited the size of holdings. Later when settlements increased in size and more ditches were built, the scarcity of water also operated to bring about similar results.

Numerous references in Mormon colonial history reveal the general practice of adhering to the principle of small holdings. When Utah valley was opened to settlement a field of 225 acres adjoining Provo was divided into 40 lots.(1) The Big Field near Brigham City was cut up principally into five-acre tracts.(2) Cache Valley farm lands were divided into lots of 20 acres each.(3) In 1861, 'Dixie' lands near the St. George townsite were surveyed into parcels of two and one-half acres.(4) Settlers near Oxford, Idaho, in 1864 took fifteen acres each, in divided portions, so that each settler had 10 acres at the south-end and five acres at the north end of Swan Lake.(5) A report in 1865 of certain settlements in southern Utah gives information as to size of cultivated areas:(6)

Place	No. of Families	Acres Cultivated	Average acreage per family
Salina	40	800	20.
Richfield	125	800	6.4
Alma	70	1200	17.14
Circleville	100	1500	15.
Panguitch	70	800	11.43

Similar data are available for the following counties for the year 1865.(7)

County	Cultivated lands to each family.
Sanpete	10
Beaver	13
Iron	6
Washington and Kane	5

(1) Whitney, O.F., History of Utah, Vol. I, pp.399-400.
(2) History of Box Elder Stake, MS., May 1854.
(3) Journal History, MS., April 9, 1860.
(4) History of St. George Stake, MS.
(5) History of Oneida Stake, MS.
(6) Journal History, MS., Sept. 13, 1865.
(7) Journal History, MS., March 9, 1866.

At Snowflake, Arizona, settled in July 21, 1878, the land was classified and divided so that each family had three parcels of land, a city lot, a ten-acre of first-class land, and one parcel of ten acres of second-class land.(1) Larger holdings are occasionally noted: at Deseret in 1861, 12,000 acres were surveyed into forty-acre parcels; and farms of 40 to 80 acres were laid out in Boxelder county in 1851 for farmers and stockraisers.(2)

Mormon practice is seen to be quite unusual when viewed in the light of that of the country as a whole. It has already been pointed out that the average acreage per farm in the whole United States in 1850 was 203 acres. If we take the sections with which the Mormon people were most familiar, the states and territories of their nativity, or those in which they had resided, prior to the exodus, we find average farm sizes as follows:

State	Average size of farms, acres
New York	113
Ohio	125
Missouri	179
Illinois	158
Iowa	185

These averages help us to see how vastly different was the system of land holding that the Mormons had devised. The average size of Utah farms increased considerably after 1870.(3) This is to be accounted for by the taking up of lands under the Desert Land Acts and not to any great change in the size of irrigated farms.

On the first Sabbath after the arrival of the pioneers in the Salt Lake valley, Brigham Young gave expression to the principle that would govern in distributing land.

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(1) History of Snowflake Stake, MS.
(2) History of Boxelder Stake, MS., May 1851.
(3) See Appendix III on Farm Acreage.

"He told the brethren that they must not work on Sunday; that they would lose five times as much as they would gain by it. None were to hunt or fish on that day, and there should not any man dwell among us who would not observe these rules. They might go and dwell where they pleased, but should not dwell with us. He also said that no man who came here should buy land; but every man should have his land measured out to him for city and farming purposes. He might till it as he pleased, but must be industrious and take care of it."(1)

Here it is distinctly emphasized that Church leaders would undertake to dictate to whom land would be apportioned. Of course, Brigham Young was well aware that sooner or later land-holders would have to reckon with government and that it would not always be possible for the Church to limit individual choices as to place and amount, but he rightly surmised that his system would become firmly established before interference could develop, and he counted on the traditional leniency of government in the enforcement of land laws. The principle of free land was frequently reiterated coupled with the wise provision that size of holding would be dependent on full utilization.(2)

In apportioning lands it was a common though not invariable rule, to determine the actual assignment by lot. This was not the rule for the

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(1) Woodruff, Wilford; Journal, MS.

(2) See for example the official statement in Journal History, MS., Sept. 9, 1847; also Millennial Star, Vol. X, pp. 117-118 and 325-326. Brigham Young's own position seems hardly consistent. He early became an extensive land-holder. Reference, for instance, is found to his dairy farm of 1400 acres in the Big Field where 1300 tons of hay were cut. (Journal History, Oct. 31, 1857.) He was naturally a large-scale operator, and had further claims to big acreage because of an extensive household and of a readiness to help others in times of need. Moreover, his extensive operations furnished employment to many who would produce more effictively under than without direction. And yet his example undoubtedly weakened the force of his precept and afforded reasonableness to the demand of others for more acreage than was customarily allotted.

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first selections of garden lots in Salt Lake City.[1] Exercising the right of leadership and no doubt quite in accord with the wishes of their faithful followers, Brigham Young and members of the Twelve, on August 7, 1847 selected lots near the Temple site, and also made reservations for others of their friends and members of their respective companies organized at Winter Quarters. Some of the Twelve made apportionments at once to members of their respective groups. "On the evening of August 17, Heber C. Kimball called together fourteen of his followers--men that he had adopted into his patriarchal household and allowed each to select a lot."[2] In all probability all the members of the original pioneer band who desired so to do were permitted to select their city lots. The writer has studied with care the earliest records available in the office of the county recorder of Salt Lake county and has been able to find the record of title to lots taken by about one-half of the original pioneers, practically all of which lie within half a mile of Temple Square. Failure to find locations for the other members of the pioneer band is easily explained. In the first place, most of the group returned with Brigham Young to Winter Quarters in 1847, and did not return to participate in the allotment of the following year. No rights of reservation appear to have been set up, except those made in behalf of pioneers who actually returned to the valley with the 1848 emigrants. These had preference over the emigrants of September and October, 1847, who also wintered in the valley. Secondly, lots were not given to unmarried men; there were many such in the pioneer group. Thirdly, the records are not wholly legible, and it may be that

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(1) See above, p. 41.
(2) Egan, Pioneering the West, pp. 105-106.

some assignments were made that are not now decipherable. Fourthly, we do not know that the records extant are the originals. Though they are in the handwriting of Thomas Bullock, clerk to Brigham Young at the time the earliest apportionment of lands occurred, and also the first county recorder, they bear evidence of being copies made from earlier notes, and some transfers and relinquishments may have occurred, so that some of the earliest allotments would not appear on the revised lists.(1) The records show evidence of original errors, such as assigning the same lot to two applicants, which occurred in many instances, requiring subsequent adjustment. At all events, it is clear that for the pioneer group, lots were selected and assigned, and not awarded by lottery as was subsequently practiced.

What proportion of the city survey (Plat A) was thus divided among the earliest arrivals in the valley, is not known, but more lots were thus selected and set aside than there were families in the valley at the date of distribution. Doubtless provision was thus made for some of the emigrants, who were at that time on their way to the valley. It was a year later, however, before the actual distribution to the rank and file took place. A member of the Quorum of the Twelve awaited return of Brigham Young before getting his lots.(2)

Whether there was dissatisfaction with this preference shown to the

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(1) The earliest records must have been made in accordance with instructions conveyed in the Epistle of the Council of the Twelve, Sept. 9, 1847. "The High Council will be furnished with a city plat on which will be registered the names of those who have had their inheritances assigned them; others may wait and return to receive their inheritances, which will in no wise interfere with their occupying all the land they can cultivate, as no one will improve their lots the coming year."

(2) Pratt, Parley P., Autobiography, p. 406.

original pioneers does not appear. In any event it was decided to use the method of lot-drawing for the distribution of farm lands 'to prevent any hardness that might occur by any other method of dividing land.'(1) There are many allusions to this method of distributing lands in the histories of Mormon settlements,(2) and it is the common belief among the Mormon people that the practice was well-nigh universal. That some ill luck was attached to the lottery method appears from the testimony of one colonist who writes that the land had been so divided in the Kanab field that what was considered his was nearly worthless. He sowed wheat, but failed to

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(1) See above, p. 48.

(2) 1851. Parowan. "In the evening the lots in the five-acre plat, which had just been surveyed were distributed among the brethren by ballot, each lot having been numbered previously on the stakes on the corner; each man's name applying for a lot formed a ticket. The tickets were thrown together and then drawn out one by one by Bishop Elisha H. Groves. The first name drawn took the first lot then to be drawn for, which was No. 2, President Smith having taken No. 1. The next name that came out was entitled to No. 3, which was the next choice, and so on until all the names on tickets were drawn. The surveyor and clerk placing the number of each man's lot opposite his name, together with the range and block." (Journal History, MS., Feb. 2, 1851.)

1859. Logan, Utah. The first settlers drew lots for their land. On July 27, first lots were laid out and drawn for. On Aug. 3, a committee of three, John P. Wright, John Nelson, and Israel J. Clark, was appointed to distribute lands to others that should come. (Tullidge, Quarterly Magazine, Vol. I; p. 532.)

1864. Circleville, Utah. Farming land at Circleville was surveyed by Edwin Fox into ten and five acre lots. Holdings were drawn by lot. (History of Panguitch Stake, MS.)

1878. Snowflake, Arizona. At a meeting of the settlers it was agreed that land should be cut into ten-acre tracts, classified as first and second class. Each man should draw for his land, a city lot (two lots to men of two families), a ten-acre tract of the first-class land and a ten-acre tract of the second class. (History of Snowflake Ward in the History of Snowflake Stake, MS.

1887. Alberta, Canada. A council meeting was held after services, Sunday, June 19, 1887, to discuss the laying out of a townsite. It was agreed that quarter sections of land should be numbered and drawn by lot. (History of Alberta Stake, MS.

produce a crop.[1] Few reports of this kind are on record. It is safe to say that such a condition would be quickly rectified upon being brought to the attention of the bishop or other presiding authority. It is obvious that the lottery method was only suitable in the initial stages of settlement when many were receiving lands at the same time. Subsequent apportionment to later settlers was controlled by the bishop, or by a special committee.

It is interesting to observe that certain rules of eligibility were applied. The apportionment in Salt Lake valley was limited to heads of families.[2] Single men were not permitted to draw. Men of two families would, of course, have two lots. In the Salt Lake valley at least mechanics were expected to take only five-acre holdings or none at all,[3] except the garden lot in the city, as it was anticipated that they would be fully occupied in their respective trades. Cedar City was planned as an industrial city. It was not expected that the iron-workers should also be farmers.

Where land is free and where every man is urged to have a little, and no one is allowed to hold more than he can till, tenancy cannot exist. Among the Mormons therefore there was at first no tenancy. And there was very little at any time until quite recently. Neither was there any large proportion of mortgaged farms.[4] The ideal of home ownership and freedom from debt has always been, and is still, held before the Saints in their

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(1) Little, James A., Jacob Hamblin, p. 139
(2) Statement of George Q. Cannon, Proceedings of the Third National Irrigation Congress, Denver, Colorado, 1894.
(3) See Chapter iv, p.48.
(4) See Chapter i, p.5.

semi-annual conferences. There is now, of course, more both of renting and of borrowing, partly because only by such means can young men move toward ownership, partly because of the need of larger capital, and partly because of the inadequacy of the older farm units as to size.

Concerning this last point an additional word might be properly be said. As farming in the West has passed out of the hoe-culture stage there have appeared serious disadvantages in the small holdings of the Mormon farmer. Under modern machine methods twenty or thirty acres do not make an economic farm unit, and yet the combining of the holdings into larger units is practically impossible. Attachment of present heirs to the old homestead and holding out for higher prices against the neighbor whose need for expansion is pressing bring about a scale of values that prevents transfers. An aggressive farmer is thus forced to increase his holdings by acquiring scattered pieces of land. An example is reported by White of a farmer residing at Provo, who farms four parcels of land, two west of the town, one north, and one south, in such positions as to roads that to go from one to another it is necessary to pass through the town. Though the farthest parcel is under three miles from the residence, to reach all the parcels requires over ten miles of travel.(1) Nelson reports a case at Ephraim of one man's owning eleven small parcels of farm land, widely scattered.(2) The former concludes that though the system of land holding was admirably suited to original conditions and needs, the majority of farms in the oldest sections are now too small to maintain the American

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(1) White, The Agricultural Geography of the Salt Lake Oasis, pp. 254-255.
(2) Nelson, Lowry, The Utah Farm Village of Ephraim, p. 12.

standard of living.[1]

Land Titles

Until 1869 settlers in Utah were merely squatters on the public domain. The Mormons for two decades systematically colonized land to which they had no title. During that time a procedure for protecting claims had to be devised and followed through three successive governments, the ecclesiastical government, 1847-1849, the provisional government of the State of Deseret, 1849-1851, and the territorial government as authorized by the Enabling Act of 1850 and set up in 1851.

The earliest surveys in Utah were made by Orson Pratt and Henry G. Sherwood who began to lay off the city lots of the proposed Great Salt Lake City on August 2, 1847. Sherwood served as the principal surveyor under Church direction until the establishment of the provisional government in the spring of 1849, when W. W. Phelps was appointed surveyor-general. A year later a law was passed providing for the election of a surveyor-general by the general assembly, and giving him power to supervise all surveys made in the state.[2] Henry G. Sherwood was elected to this office. County surveyors were at first appointed by the governor, but were made elective officers by act of the territorial legislature in 1852.[3] The office of surveyor-general for Utah was first recognized by Federal law in 1855.[4]

The earliest claims to land were those set up by Church leaders in

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(1) Opus Cit., pp. 277, 280.
(2) Ordinances of the General Assembly of the State of Deseret, Ch.IV; reprinted in Acts, Resolutions and Memorials, Salt Lake City, 1855, p. 62.
(3) Ibid., p. 174.
(4) Millennial Star, Vol. XVII, pp. 286-287.

August 1847 when they selected lots in the Salt Lake City Survey. Instructions were given that allotments were to be registered on a city plat.(1) The recording of these names was assigned to Thomas Bullock who continued to hold office as county recorder of Salt Lake County under the provisional government and the territorial government until 1856. Though Bullock was a careful clerk there is evidence of considerable confusion in the earliest records now available which are merely lists of names with numbers of lots and blocks. Based on this experience the provisional government defined by law the procedure in validating land claims. It was provided that "in all new surveys certificates approved by authorized surveyors shall be considered title of possessions to the holder of the same for the amount of land therein described." All surveys "made by himself or reported to him by others" were to be recorded in the office of the surveyor-general. Another act defined with some indefiniteness the duties of county recorders, who were to "record all transfers or conveyances of land or tenements" and "keep a book for the purpose of recording town and city plats and plats of all surveys of lands."(2) In the Salt Lake County records the first recorded transfer for which a date is given is of August 27, 1850. These laws did not specifically require the recording of titles of possession of surveys and there was evidently considerable carelessness in putting claims in the records. Accordingly the territorial legislature two years later passed more specific laws and put some teeth into them. County surveyors were put under bonds and were required within thirty days after the completion of a survey to transmit one true copy to the county recorder and one to the

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(1) Epistle of the Twelve, Sept. 9, 1849; Journal History, MS., same date.
(2) Act of March 2, 1850 in Acts, Memorials and Resolutions, 1855, p. 62.

surveyor-general and to give a certificate to the person for whom the survey was made.(1) The certificate of title was very simple, as the following example shows:

(Box Elder Survey, Weber Co. U. T.
(
George F. Hanson (Lot No. 37 or 40 acres.)
( ) Fees paid surveyors.
(Lot No. 38 of 40 acres.)

Recorded in the State Office, June 17, 1852. (2)
(Signed) Henry G. Sherwood, Surveyor.

By the terms of an act to regulate transfers of possession of land, the County recorder was prohibited from recording any land to any person until a certificate of survey "countersigned by one or more of the select men of the county" had been produced.

Transfers were to be made by quit-claim deed, acknowledged before the county recorder, and in the following form:

> Be it known by these presents, that I_____the just true, and rightful claimant, owner, and possessor of lot _____ in block_____containing _____ acres in _____ survey, in _____ county, do, for and in consideration of the sum of _____ dollars to me in hand paid by _____the receipt whereof is hereby acknowledged, sell, release, quit claim, and transfer all my right of claim, interest, and possession of and to the aforesaid premises, to the said_____heirs or assigns. (3)

It was also provided that to legalize a claim to transferred land, the deed of transfer had to be recorded within thirty days.(4) At the same time a validation of claim hitherto unrecorded was undertaken. The Deseret News of January 24, 1852 carried the following notice:

By Order of the Surveyor General, H. G. Sherwood, I have

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(1)Act of March 3, 1852 in Acts, Memorials and Resolutions, 1852, p. 95.
(2) History of Brigham City, Box Elder Stake, MS.
(3) Act of March 6, 1852, in Acts, Memorials and Resolutions, 1852, p. 66.
(4) Act of March 3, 1852, in Acts, Memorials and Resolutions, 1852, p. 95.

> connected all of the surveys in Utah Valley, and am now ready to settle and give certificates for the same. N. B. the Surveyor General wishes all the returns made against the first day of April next.
> (Signed) Andrew J. Stewart, County Surveyor, Provo City. (1)

To complete the record in Salt Lake County a resolution was passed by the legislature:

> Resolved by the Governor and Legislative Assembly of the territory of Utah, that all lands within this territory that were surveyed by William M. Lemon, county surveyor of Great Salt Lake County, which have not been returned to the office of the surveyor general, the claimants of such lands are hereby required to present such claims with the claimants names, tracts, parcel, price or parts of land so claimed, to the surveyor general, by or before the first day of June, A. D. 1852. All pieces and parcels of land not known in said office after that date, will be only known as unsurveyed land, subject to be given out to applicants. (2)

To maintain a claim to surveyed lands it was provided in 1852 that all such claims must be enclosed within one year. At the expiration of the year the land again became common land and could "be surveyed to any person applying for the same." (3) At the time of passage of the act there were still many lots in Salt Lake City unenclosed, though possessions had been claimed under the original allotment for at least three and a half years. (4) The requirement to fence lands was an effective way to limit holding for speculation. Joint enclosures were, of course, permitted under regulations for enforcing the maintenance of the fence.

All land laws in Utah before the establishment of a Federal land office in the territory were for the regulation and securing of rights of possession only. The perfection of title had to await the pleasure of the Feder-

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(1) Deseret News, January 24, 1852.
(2) Acts, Resolutions, and Memorials, 1852, p. 216.
(3) Acts, Resolutions and Memorials, 1352, p. 67.
(4) See notice of Bishop Pettigrew in Deseret News, Jan. 24, 1852.

al government which on account of the lack of esteem in which Mormons were held was slow to act. Attempts were made to obtain a grant of free lands for the earliest settlers according to the precedent applied to Oregon, and to New Mexico in 1850. In the former year Congress passed a bill granting a half section of land to any single man who had settled in Oregon before 1850. A married man and his wife could receive a half section each. Quarter-sections were offered to all those who should settle in the territory between 1850 and 1853.(1) The legislature of Utah in its first session memoralized Congress for similar grants, and renewed the petition in 1859. Having entered foreign soil and actively assisted in winning it for the United States, and having defended the frontier against Indian aggression, the Mormons saw a parallel in their settlement of Utah and that of the pioneers of the northwest. However, they were unable to get Congress to favor them. Meanwhile they continually urged upon the Federal government the hastening of government surveys and the extinguishment of the Indian titles, and the failure of the government to act was the cause of much complaint. It was recognized that the pre-emption act of 1841 would have to be liberally construed to meet Utah conditions. The act required fourteen months residence on the land, and permitted the entry of 160 acres. Under the farm-village system Mormons lived in the village and travelled to and from the farm lands. Technically this would preclude the application of the principle of pre-emption or of homestead under the act of 1862, which required five years residence. A petition of 1859 presents the problem clearly:

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(1) Hibbard, B. H., A History of Public Land Policies. pp. 353-54.

To Congress for the Pre-emption of Irrigated lands. To the Honorable, the Senate and House of Representatives, In Congress Assembled:---

Your memorialists, the Governor and Legislative Assembly of the Territory of Utah, would respectfully represent, that in the settlement of this wild and desert country, it was found necessary to locate in cities, towns, villages and forts, for mutual protection against the savages, and to enable the settlers to irrigate the lands, they were under the necessity of surveying and enclosing small tracts of from one to forty acres each; very few however, exceed twenty acres. By this means, in locating almost every settlement, from fifty to one hundred farmers cultivate the same section, which is watered by a canal owned by each agriculturist, in proportion to the area of his farm, meadow, or garden; the waters of said canal being distributed to each man in a separate water ditch; a hundred or more of these streams water every section cultivated.

Your memorialists would therefore respectfully pray your honorable body, to pass a law enabling the occupants of such portions of land, to appoint one of their number an agent, who shall be authorized to pre-empt and enter said lands in a body, and distribute the same by giving titles to proper claimants. And your petitioners as in duty bound, etc.

Approved Jan. 12, 1859.(1)

Though no such modification of the law was made, the procedure described was actually followed. When the land office was finally opened in 1869, the land was entered in quarter-sections as homesteads by 'trustees,' who subsequently deeded the several parcels to the rightful claimants. Church lands were similarly entered. George A. Smith, for instance, entered the site of the St. George Temple.(2) No instances are known of betrayal of trust by the entry men. Concerning this technical infraction of the laws, Thomas says:

"The only thing to be said for this violation of the land laws of the United States was that it was done with the full knowledge and at least the connivance of the United States officials and not with the idea of speculation or fraud against the government, but to secure title to the soil that the pioneers had reclaimed and made productive by irrigation. The failure to live on the land was merely a technicality as they

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(1) Journal History, MS., Jan. 12, 1859. Memorial on lands.
(2) Journal History, MS., Sept. 10, 1874.

were really home lands and the owners lived in nearby communities." (1)

Townsite lands were entered by the mayor, who issued deeds to the actual occupants. Because of the population and extent of Salt Lake City a special act was passed by Congress to permit the entry of more lands than was permissible under existing law. The total area of lands entered for Salt Lake City was 5730.45 acres.(2)

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(2) Record of the City Council, MS., Aug. 16, 1872.
(1) Thomas, George, The Development of Institutions under Irrigation. p. 41.

CHAPTER VIII

CONTROL OF TIMBER, GRAZING, AND MINERAL LANDS

Of arid lands only a small proportion are suitable for tillage. In 1920 less than ten per cent of the total land area of Utah was included in farms. Contrast this condition with that in the corn-belt states where more than ninety per cent of all land is in farms. If we compare the acreage of improved land in farms, the difference is still more striking. In the United States as a whole one acre in every four is improved; in the corn-belt, one in two; in Utah, one in thirty. Of the vast stretches of unimproved land in arid states, a considerable portion is absolutely barren. There remain, however, extensive areas of forest and pasture lands of great economic value. Fortunately, too, there are large deposits of coal, iron, copper, lead and the precious metals, which are a source of great wealth and the basis of important industries. A study of Mormon land policy requires an account of the utilization of these resources.

Timber Lands

The great need of forest products for providing homes, fencing, and fuel, and the relative scarcity and inaccessibility of timber, made control of timber lands imperative. The pioneers had come from regions where farms had to be cut out of the forest, into a treeless desert. Their policy in controlling forest lands was dictated by necessity. We turn again to the Epistle of September 9, 1847 for the earliest expression of timber-land control.(1) Economy of use is repeatedly urged. As far as pos-

(1) Journal History, MS., Sept. 9, 1847.

sible dry wood unsuitable for timber should be selected for fuel. Trees and shrubs in and about the city (survey) should be preserved and trimmed so that they may grow tall and straight, and young trees in the canyons should be preserved for transplanting. All specimens of the sugar maple were to be spared as a source of sweets until sugar cane could be introduced. Fences should be made of sun-dried brick. With these precautions timber was to be gathered for making furniture, farm implements, and tools. "We feel sure that there is timber in the vicinity of the city for all necessary purposes, until we can raise more, if the brethren are prudent and waste none."

The High Council found it advisable to cut poles for house-building and fencing. To have built the field fences with adobes would have entailed herculean labors. But stringent regulations for the cutting of timber were passed, prohibiting building with logs without permission, and limiting the quantity of fuel that one person might have to an amount sufficient to last to the first of October, 1848.(1) Larger supplies of timber discovered in the canyons south of the city led to a relaxation of these stringent regulations after the return of the Presidency and Twelve in the fall of 1848. But supervision by committees was continued. Permission was given for the removal of all timber within a radius of thirty miles. Within this area supplies were ample for years. Lack of roads into the canyons proved a great obstacle. This situation was met by granting rights to individuals to construct toll roads. Frequently such right were granted in connection with the right to erect a sawmill on the canyon

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(1) Journal History, MS., Jan. 25, Feb. 10, 1848.

stream.[1]

When the provisional government was established, similar grants were made by the General Assembly of the State of Deseret. This body disposed of the timber-rights in several canyons in the vicinity of existing settlements to prominent men.[2] Under the conditions of the grant to George A. Smith, which is typical, no person is permitted to take timber without the consent of the grantee and payment to him in labor or other means for use of the roads. To require the prompt removal of cut wood, the proprietor was authorized to sell any left an unreasonable time and to pay the proceeds into the public treasury.[3] It is apparent that the grants were intended not as a conferring of unconditional title, but as a means of social control terminable at the will of the granting power, though such intent was not always clearly expressed. The grant of the 'sole control of City Creek and Kanyon' to Brigham Young for a flat sum of five hundred dollars was exceptional in that it reserved no rights to the public and imposed no obligations upon the grantee.[4] In some cases

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(1) A typical instance is the grant to Ezra T. Benson and associates of saw and building timber rights in Pine Creek Canyon, Small Creek Canyon, and of a mill site on Big Creek in Tooele Valley, conditioned on their building suitable roads and supplying lumber to those deserving it at $20 per thousand feet. All shingle timber was reserved. Individuals were permitted to get logs out for themselves and have them sawed at the mill for a toll in kind of one-third of the lumber sawed. (Journal History, MS., Nov. 24, 1849.)

(2) E. T. Benson retained control of canyons near Tooele. Geo. A. Smith was given the timber in the east side of the range of mountains west of the Jordan. North Cottonwood canyon passed into the control of Willard Richards. The 'first canyon south of Mill Creek' (Big Cottonwood) was given to James Rawlings. Little Cottonwood passed into the hands of Benjamin L. Clapp and Charles Brown. Parley's Canyon was already controlled by Parley P. Pratt, who first explored it in 1848.) (Laws and Ordinances of the State of Deseret, Compilation of 1851. Repeated Jan. 21, 1853. Laws of Utah, 1853, pp. 35,36.)

(3) Laws and Ordinances of the State of Deseret, 1851, p. 16.

(4) Ibid., p. 5.

the toll was fixed and the privilege to collect was to terminate when the proprietor had been fully reimbursed for his expenditures. An annual report of increase and expense was to be rendered to the auditor of public accounts. When mill privileges were included in the grants, they were always given subject to the reservation for purposes of irrigation. It is interesting to note that the lines of jurisdiction between the ecclesiastical and civil governments were not clearly drawn even on such a matter as making land grants and both the Assembly and the High Council made grants during the same period.

Concerning these grants George Q. Cannon, a leading Mormon and one-time delegate to Congress, explains: "At no time and under no circumstances was any action of this kind taken with a view to bestow the ownership or title upon any person who might occupy the land, or to whom any grant might be given. But our canyon roads had to be made, and it required some action on the part of the Legislature to induce men to build costly roads into our mountains, and to build bridges over our canyon streams. I have known canyon roads there costing over $12,000 to be swept away in a single storm. Grants of this kind were given in the early days of this Territory for such purposes, and also for herd grounds and other purposes that local rights might be preserved. * * * We lived in Utah Territory twenty years before the land laws were extended over us; we had to do the best we could. As soon as these laws were extended over our Territory we then obtained title to our lands."(1)

Though the grants were terminable, they contained no provision for their termination. They were subject, of course, to the general land laws

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(1) Quoted by Whitney, Orson F., History of Utah. Vol. I, pp. 455-456.

of the United States, when the government should see fit to take a hand in the matter. So far as the intent of local officials went they were apparently permanent and hereditary.(1) The rights were also transferable during the life of the grantee.(2)

After the passage of the acts authorizing these special grants, the Assembly passed a general act transferring to the judges of the several counties the authority to grant mill and water power privileges and to control the timber within their respective jurisdictions. Grants made by county judges were subordinate to'the rights of the community for common uses or irrigation' and to the special grants already made.(3)

With the organization of the territorial government jurisdiction over water and timber was given to the county courts, consisting of the probate judge and the selectmen.(4) That there was a great deal of sentiment in favor of the system of private control was made clear by an action of the general conference of the Church in October, a few months after the passage of the act granting the above-mentioned powers to the county courts. Brigham Young moved that the Church go on record as favoring the control of the canyons by private individuals charged with the obligation of making good roads and privileged to reimburse themselves from tolls. In talking to the motion he pointed out that there had been a good deal of quarreling, cursing, and swearing in getting wood out of open canyons. No one was

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(1) After the death of Willard Richards the members of Farmington Ward negotiated the purchase of the mill and timber rights from Brigham Young (probably representing the heirs) for 100,000 feet of lumber to be paid in 10 annual installments. (Journal History, MS., Nov. 20, 1851.

(2) For instance, James Rawlings, who received timber rights in the first canyon south of Mill Creek (December 3, 1850) transferred his privileges to Orrin P. Rockwell and John Neff in the following year. (Journal History, MS., Nov. 20, 1851.)

(3) Laws and Ordinances of the State of Deseret, p. 68.

(4) Acts, Resolutions, and Memorials, 1852, p. 48.

responsible for the road. A man who would go to the trouble of building a road into timber would soon be rewarded by having the supplies opened up and carried away by his neighbors. Even cut timber was not safe. Twenty-five cents a team was a small price to pay for good roads and regulation. The motion was passed unanimously, whereupon the President concluded: "Now this is my order for the judges to take due notice of; it does not come from the Governor but from the President of the Church; Put these kanyons into the hands of individuals who will make good roads into them and let them take toll from the inhabitants that go there for wood, timber and poles. (1) It is perhaps more than a coincidence that the county court of Davis County a few days later made a number of grants for the making of toll roads into the timber and fixing a charge of twenty-five cents a load. (2) Similar actions were taken by the officers of other counties. (3) A complete study of these grants would require an examination of the records of the several counties.

Official complaint was made of these grants by Surveyor-general David H. Burr.

> "The exclusive right to every considerable canyon has been granted by the legislature to favorites of the Mormon Church who compel the settlers to pay high prices for the privilege of getting their wood from them. They have erected sawmills in many of them and the timber is fast disappearing." (4)

This report was correct except as to the exaction of high fees. It is

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(1) Journal of Discourses, Vol. I, p. 209-18.
(2) Minute book in Davis County Court House.
(3) For example, La Verkin Canyon in 1856 to Peter Shirts and Gilbert Morse, and grant of Pine Valley, Sept. 1856, and many others. History of St. George Stake, MS.
(4) Report of Surveyor-general David H. Burr, Sept. 30, 1856, in House Executive Documents, 34 Congress, I Session, pt. 2, serial 893, p. 542.

hard to believe that unregulated cutting, with the consequent uneven distribution of the burden of opening roads and the private quarrels that were possible, was to be preferred to the method adopted.

Not until July 16, 1868 were the land laws of the United States extended to the territory of Utah. Until that year the settlers from the beginning had been squatters on the public domain and technical violators of law in every act of cutting and removing timber. But the enforcement of the law would have completely prevented the settlement of the public lands, not only in Utah but wherever the tide of settlement flowed in advance of official opening of the lands. Even when the pre-emption and homestead laws were made to apply, the cutting of timber except in individual claims was contrary to law until after the passage of a series of acts beginning in 1878. In the arid West, lands suitable for agriculture were generally treeless, and many areas bearing forest are mountainous and of little value for cultivation, so that they could not be included within desirable pre-emptions and homesteads. Consequently, the existing land laws over Utah in 1868 did not operate to legalize timber cutting. The Mormons were fully aware of their position, and in making regulations and passing laws for local control of timber lands they were undoubtedly serving their own needs and that of the country more wisely and economically than would have been the case under a laissez faire policy.

Grazing Lands

That the grazing of livestock was the only way to use effectively the extensive areas of non-irrigable lands was at once evident to the Mormon pioneers. The enthusiasm of one of the early leaders quoted below could be paralleled by remarks of many observers:

> "As a grazing country, there is scarce its equal on the glove. Milk, cheese, butter, beef, &c., are very fine and abun-

dant. The region around us would support millions of cattle and sheep, not only in the vallies but on the mountains. Our cattle climb the highest hills, and delight to graze on the sides of the steepest declivities where it is possible for them to climb.

"The best foundation for a living in this country would be a herd of young heifers, driven from the States, or a drove of sheep. Butter, cheese, milk, beef, &c., will always find a ready market, and command a high price, because of the travel and traffic therewith, as well as domestic consumption." (1)

From the earliest settlement of the valley encouragement was given to the increase of flocks and herds. Every immigrant train brought horses, cattle, and sheep. To increase the supply of dairy cattle the colony sent during the winter of 1847-48 to California for a herd of cows. In the second year an agent was sent back for sheep.(2) Large herds were soon built up by individuals, and also by the Church, which by the payment of tithing in kind, became possessed of a large share of the increase.

Protection of crop lands as yet unenclosed made some regulation of the grazing of cattle necessary in the first year of occupancy of the Salt Lake valley. The Twelve designated the land bordering the west line of the city as common pasturage, suggested the use of the valleys south, north, and west in open weather so that feed near the camp would be available in the winter, and advised careful organization for the cooperative herding of cattle.(3)

Private appropriation for use of pasture lands occurred in the second year of settlement (1848).(4) But these appropriations did not mature into

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(1) Letter from P. P. Pratt, July 8, 1849, Millennial Star, Vol. XI, p. 342
(2) Journal History, MS., Jan. 6, 1849.
(3) Epistle of Sept. 19, 1847. Journal History, MS., same date.
(4) At that time the Bingham brothers began herding on the west side of the valley and Sessions and Haight took up locations in the vicinity of the present Bountiful and Farmington town-sites.

rights, save to the extent that acreage was used for plow-land. Soon the High Council began the parcelling of grazing lands by making grants of use. To Brigham Young and Heber C. Kimball was given the right to enclose the table lands, and the mountain spurs east of the city--"as much as they wish for pasture."(1) Cooperative herding was still the rule, and on this date a committee was appointed to investigate the possibilities of Utah valley as a stock range. Though the committee report was adverse the repeated killing of stock by Indians in March indicates that herds had been sent into the valley.(2) Owing to the shortage of breadstuffs, the herds were greatly depleted by necessary slaughtering for food. This condition was temporary. About this time Antelope Island in Great Salt Lake was appropriated by the Church for pasture. Enclosing of other pasture land for tithing cattle on the north line of the city is officially reported early in 1851,(3) and the reservation of the lands lying between Emigration and Parley's Canyon for the teams engaged in hauling stone for the fencing of the University lands was also agreed upon.(4)

The only laws regarding grazing passed by the General Assembly of the provisional government of Deseret were three acts approved Feb. 12, 1851, on the subjects of herding, estray pounds, and enclosures and trespass. All unenclosed lands are declared common pasturage. The responsibilities of herders are defined. It is required that all farm lands be enclosed with good and lawful fence.

The need of more adequate regulation was brought to the attention of the territorial legislature in the message of Governor Young, Dec. 13,

(1) Journal History, MS., Jan. 6, 1849.
(2) Journal History, MS., Jan. 6, March 5, 1849.
(3) Millennial Star, Vol. XIII, p. 211
(4) Millennial Star, Vol., XIII, p. 265.

1853. After emphasizing the importance of stock-raising as a source of wealth, and calling attention to the growth of the California markets, the governor suggests legislation to regulate herding and herding grounds. Conflicts were frequent. Cattle roaming at large were frequently lost. Some concerted effort was desirable either to make large enclosures or "to provide suitable herding, which as yet has not been done amongst us."(1) An act was accordingly passed providing that herders be placed under bonds and licensed for a year at a time by the probate judge of the county in which the herd ground is located. The herd ground must be surveyed by the county Surveyor and a plot filed with the county clerk. No encroachment upon previous rights or upon the range necessary to any settler or to any settlement is permitted. Ownership in the improvements is recognized and may be transferred; but it is specifically stipulated that the use of new grounds under license established no claim for continued use beyond the period of the grant.(2) At this time there were many enclosures of pasture in the vicinity of settlements, some held in joint proprietorship and some by individuals.(3)

Despite the granting of the power to license herders and to set off

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(1) Deseret News, Dec. 15, 1853.
(2) Acts and Resolutions, Third Annual Session, pp. 20-26.
(3) Examples are the holding of George A. Smith at Provo, and the enclosure of Dr. Willard Richards near Salt Lake City. In Salt Lake City there was the big field west of the Jordan River known as Pulsipher's pasture cooperatively controlled; also the Sixteenth Ward pasture, and doubtless others. Advertisements in the Deseret News of this period contain many allusions to pastures evidently controlled by private parties. That fences were none too good is clear from the many notices concerning strayed cattle. Herding on shares or for a fixed amount per head had already become quite a business. The law recognized it and provided means to prevent disputes which had evidently been more or less frequent. (Journal History, MS., May 29, 1856; Advertisement in Deseret News, Oct. 24, 1855.

herd-grounds to the counties, the territorial government continued to make special grants. The first of these made subsequent to the county licensing act were approved January 19, 1855.(1) During the session of the legislature of 1855-56 eighteen such special grants were made and within two or three years a total of twenty-nine. This arbitrary disposal of the public grazing lands not only restricted the equally valid rights of other residents of the territory, but incurred the displeasure of General Johnston at the time of the invasion of Utah by the Federal soldiers. The General disregarded the claims of territorial grantees and took possession of Rush valley for government stock.(2)

Official cognizance of the desirability of terminating these grants was taken in the message of Governor Cumming, December 12, 1859. He has this to say:

> "Colonel S. C. Stambough, Surveyor General for the Territory of Utah, commenced on the twenty-sixth day of October, eighteen hundred fifty-nine, an examination of certain surveys, made during the administration of his predecessor, the accuracy of which surveys has been questioned. If these surveys be approved, it may be reasonably supposed that the government will establish land offices here, so soon as the Indian title shall have been extinguished.
>
> In view of the public lands in this Territory being offered for sale by the proclamation of the President of the United States, I would commend to your consideration the propriety of adopting some legislation in relation to the grants of kanyons, water pow-

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(1) To Heber C. Kimball and associates was granted 'Parley's Park and the adjoining valley lying southward, including Silver Creek' for a period of twenty years. To Miles and Franklin Weaver was granted a large area between Utah Lake and the ridge of the mountains between Utah and Cedar valleys. In this act there is no limitation of time; but it contains two other limitations not mentioned in the Kimball grant. One of these required compliance with existing laws in relation to herding, and the other was a reservation of the right of the public to take timber, wood, or poles from the area within the grant and to graze their teams while thus engaged.

(2) Letter of John Taylor, Journal History, MS., Jan. 12, 1859.

er, timber, tillable lands and other property belonging to the United States. I am aware that these grants are considered as only temporary arrangements, for the purpose of inducing parties to spend labor and money in rendering the property available. It is quite evident, however, that all these grants will be entirely valueless, unless sanctioned by the United States government, in which is vested the exclusive ownership of these lands and from which source alone any valid title can be acquired.

Under existing circumstances, the grants of lands to be used for herding and other purposes are unreasonably large and their occupancy has become exceedingly oppressive to certain portions of the community, and I would recommend the adoption of measures for their eventual abolishment.

The land laws of our country are based upon wise and liberal principles and extend their protection to actual settlers upon the public domain, against the usurpation of individuals and speculations of monopolists.

When the lands are open to sale and pre-emption, the public interest, and more especially the interest of the poorer clases, would be promoted by restricting claims by law to less than quarter sections, and I believe they should be restricted to lots, not exceeding twenty acres each.

I would recommend that Congress be memorialized on the subject of the subdivision of quarter sections, in accordance with the suggestions contained in the foregoing paragraph, and also for the permanent establishment of some system for the equitable distribution of water and timber. If this latter provision be neglected the new occupants of the kanyons and timbered lands may exercise an oppressive influence upon the occupants of tillable lands in the valleys." (1)

In accord with the recommendations of the governor an act repealing all the special grazing-land grants was passed and approved January 20, 1860. In view of the earlier action granting powers of control of grazing lands to the counties, the special grants can hardly be justified. Both wisdom and necessity support the method of control of forest lands already discussed, but neither appear to have prompted the extension of special privilege to grazing lands.

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(1) Journal History, MS., Dec. 12, 1859.

For the more effective utilization of the grazing lands the Church beginning in 1869 encouraged the organization of cooperative herds. It was a period when the cooperative movement was spreading rapidly in Mormon communities and involving all phases of industry. Nearly every county had its cooperative organization for the improvement of livestock. Apostle Wilford Woodruff was the active head of the movement. The purposes to be served were to prevent damage to crops by organized herding; to prevent loss of stock by straying and by theft; to improve the quality of herds by careful breeding; to facilitate purchasing of stock and supplies; to control marketing; to utilize grazing areas more effectively.(1) The range was free, of course, but the organization of the cooperative herds on a large scale greatly reduced the possibilities of conflict by eliminating competitive use of the range. Some of these organizations persisted for years.

Mineral Lands

The Mormons early developed a self-defensive bias against mining for the precious metals, so that the only policy they developed was emphatically negative. The rush to the gold mines of California threatened to bleed the struggling Mormon colonies of their strength and drew many a denunciation of gold seeking from Church leaders. Those who yielded to the lure of the mines were severely rebuked; some were excommunicated; all were admonished to remain at home and develop the resources about them.

> "When men, professing to be brethren, go to the mines according to their own counsel, we want them to stay until they are satisfied--until they have obtained enough to make them comfortable, and have some to do good with, and a disposition to use it

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(1) Journal History, MS. Jan. 3, Jan. 23, Feb. 22, 1871.

> for that purpose, and not run back here in a few months, lock up their gold, boast how much they have made, doing no good themselves, and hindering everybody else from doing good over whom they have an influence, curse God, deny the Holy Ghost, and when spring opens, run to the mines again, as some have done. Let such men remember that they are not wanted in our midst; for unless they speedily repent, the wrath of an offended Creator will suddenly overtake them, and no power can stay it. Let such leave their carcasses where they do their work, we want not our burial grounds polluted with such hypocrites; but we have it in our hearts to bless all men who will do right, whatever their occupation, and our arms are ever open to embrace such, and we pray for all men who are ignorant, or out of the right way, that our Heavenly Father will give them His spirit that they may learn and do right." (1)

Brigham Young declared that he had made more in a year than the luckiest of the miners in the same length of time, and that the possessions of twenty-five average men from any of the settlements would exceed the total wealth of twice as many gold-diggers.(2) No country could prosper that made gold its major objective . The wealth and power of England lies in its coal, iron, and labor. Contrast the history of Spain and Mexico, in which the pursuit of gold had undermined the foundations of true prosperity and had developed inferior civilizations.(3) "The Saints can be better employed in raising grain, and building houses in this vicinity, than digging for gold in the Sacramento, unless they are counselled so to do. The true use of gold is for paving streets, covering houses, and making culinary dishes, and when the Saints shall have preached the Gospel, raised grain, and built cities enough, the Lord will open up the way for a supply of gold to the perfect satisfaction of His people."(4)

These early teachings, so necessary to hold the weak communities to-

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(1) Millennial Star, Vol. XII, p. 245. Third General Epistle, April 12, 1850.
(2) Millennial Star, Vol. XIII, p. 17.
(3) Journal History, MS., July 8, 1849.
(4) Epistle of Presidency, Millennial Star, Vol. XII.

gether, became so firmly implanted that for a whole generation it was believed that to search for the precious metals was evidence of loss of faith. Erastus Snow, one of the greatest of Church colonizers stated in 1865 "that for the future, he wished any man that would go to the western mines as a miner to be cut off the Church."(1) And in the same year, an editorial appeared in the Deseret News to the effect that the digging of one canal was a greater contribution to community prosperity than the discovering of ten gold mines or the opening of ten thousand stores. The former was a general, the latter an individual benefit only.(2) It is interesting that this attitude should have been maintained in the face of the most perplexing shortages of circulating media in the Mormon communities. The Church leaders were well aware of this need, frequently referred to it, and indeed set up a mint for the coining of such gold dust as could be obtained from the Battalion boys and others returning from the mines; but they were at the same time clear in their economic philosophy that the development of agriculture and home manufacture would bring them all the precious metals they should need. It can be readily understood that though 40 per cent of the wealth of Utah is now derived from its mining industries the Mormons have had only a secondary place in mining development.

Far different was the Church attitude toward other mineral resources. The goal of economic self-sufficiency could only be achieved by the development of a well-balanced economy in which agriculture and stock-raising were supplemented by a complete system of home-manufactures. Coal and iron were basic and every encouragement was given to the discovery and exploitation

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(1) Erastus Snow, Journal History, MS., Aug. 31, 1865.
(2) Deseret News, Jan. 4, 1865.

of deposits of these minerals. When found, they were considered community property and were developed by those assigned to the task by local or general Church authorities.

CHAPTER IX

THE CONTROL OF WATER

Water is the vital element in the development of arid regions. In the humid sections of the world the land problem lies in the actual or threatened scarcity of earth surface relative to the growing needs and increasing numbers of those that dwell upon it. The chief water problems are those of water pollution and excess precipitation requiring sanitation, drainage, and flood control. In arid regions good 'land' is relatively plentiful. Extensive areas exist where all the soil elements save moisture are richly supplied. There is water in fact for only one acre in twenty. In such regions men will fight for the possession of a spring and defend a water right with their lives. Mormon experience in the distribution of water is significant because of its bearing on the development of scientific irrigation, its contribution to the definition of water rights, and the cooperative institutions that were developed by the Mormons for conserving and managing water rights.

The Mormon system of water utilization was the natural outgrowth of their attempt to realize their social ideals in a niggardly environment. In their economy of water they set aside the institutions to which they had been accustomed and developed a practice in conformity with the demands of their religious teachings and the new environmental conditions that confronted them. In Chapter I, we have briefly described the climatic features of the arid regions. If those features are kept in mind, the reader will readily perceive the nature of the problem that presented itself to

the Mormon pioneers. Rainfall is scanty and is so distributed seasonally that there is scarcely any precipitation during the crop-growing season. By a wise provision of Nature, however, the mountains serve as immense storage reservois where the water is accumulated in the rainy season and released during the spring and summer. Upon the streams thus fed from melting snow and ice and from percolating waters, depends the existence of those who dwell in the region.

For the few people that reached Utah in the earlier years of the Mormon immigration, there were ample supplies of water. But the Church leaders anticipated a large and compact population and invariably made their plans with their eyes on the future. Selfishness was promptly suppressed and no man was permitted to take that for which he had no immediate use. We have seen how this policy worked out in the allotment of land. We are now to examine its results in economizing the supply of water.

When the Mormons first set foot on the parched ground of the Salt Lake valley there had been among Anglo-Saxon peoples no significant experience with irrigation. But the practice had been carried on for centuries in Egypt, India, Spain, Italy, and other arid countries. Irrigation was practiced by ancient Americans and by their modern successors, the Indians and Spanish, in the arid portions of the United States.(1) Miles Goodyear was farming successfully when the Pioneers entered the Salt Lake valley in 1847. But the Mormons were the first among Anglo-Saxon peoples to practice the art of irrigation on an extensive scale.

Before their departure from Winter Quarters for the Salt Lake valley the Mormon leaders had given consideration to the problem of irrigation.

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(1) Brough, C. H., Irrigation in Utah, p. 2; Thomas, George, Development of Institutions under Irrigation, pp. 11-13.

Records of meetings held to discuss preparations for their journey allude to 'irrigation science' and contain the following: 'We have to search for land that can be irrigated.'(1) Reference has been made above to their first application of water to the sun-baked lands.(2) The season was already so far advanced that they learned little that first year about the necessity for and the art of irrigation. In the memorable document in which the Church leaders, who were returning to Winter Quarters, left instructions for the guidance of the colony over the first year, we find this:

> Should irrigation be found necessary, the City Creek will yield an abundance of water for that purpose, and it is wisdom that you should provide for any such contingency. We would therefore recommend that you prepare pools, vats, tubs, reservoirs, and ditches at the highest points of land in your field or fields, that may be filled during the night and be drawn off to any point you may find necessary, through a tight and permanent gate prepared for that purpose when it shall have become sufficiently warm, so as not to check vegetation. (3)

The impracticability of the suggested procedure is not surprising if we keep in mind the fact that these men were confronting problems absolutely new to Anglo-Saxon civilization. They had still to discover by experimental means the whole technique of farming under arid conditions. The striking characteristic of the document is its revelation of the care taken by these frontiersmen to anticipate every difficulty and of their readiness to undertake prodigious labors to achieve their ends. A suggestion that proved practicable and that anticipates 'dry-farming' practice was that the colonists experiment with early grain to discover whether it could be ripened without irrigation.(4)

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(1) Journal History, MS., Feb. 27, 28, 1847.
(2) Orson Pratt's Journal, Millennial Star, Vol. XII, p. 179.
(3) Journal History, MS., Sept. 9, 1847.
(4) Ibid., Sept. 9, 1847.

Experience in the use of water was varied and significant in the season of 1848. By May 22, winter wheat and early-sown grains had grown so well that the best informed men had about concluded that such crops could be produced without irrigation.(1) Basis for a different view was found before the grain harvest, which began early in July. One observer reports that much of the grain was 'very short for want of irrigation in season.'(2) Another was pleased with his sixty bushels of wheat raised without irrigation and corn that grew seven feet high before the first watering;(3) but he observed that the yield per acre of irrigated wheat was double that of unwatered wheat.(4) Summarizing this first year's experience the First Presidency commented as follows:

> "On our arrival in this valley (Sept. 1848), we found the brethren had erected four forts, composed mostly of houses, including an area of about forty-seven acres, and numbering about 5,000 souls, including our camp. The brethren had succeeded in sowing and planting an extensive variety of seeds, at all seasons, from January to July, on a farm about twelve miles in length, and from one to six in width, including the city plot. Most of their early crops were destroyed in the month of May by crickets and frost, which continued occasionally until June; while the later harvest was injured by drought and frost, which commenced its injuries about the 10th of October and by the outbreaking of herds of cattle. The brethren were not sufficiently numerous to fight the crickets, irrigate the crops, and fence the farm of their extensive planting; consequently they suffered heavy losses; though the experiment of last year is sufficient to prove that valuable crops may be raised in this valley by an attentive and judicious management." (5)

It is evident from this succinct statement that many of the problems to be solved in the development of a suitable technique had presented themselves in this first season. Discouragements had been great; famine had been imminent; but valuable experience gained and partial success with

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(1) Journal History, May 22, 1848.
(2) Journal History, July 17, 1848.
(3) Letter to Brigham Young, Journal History, MS., Aug. 8, 1848.
(4) Letter to Orson Pratt, Journal History, MS., Sept. 18, 1848.
(5) First General Epistle of the First Presidency to the Saints scattered throughout the Earth. June 22, 1849. Millennial Star, Vol. XI, p. 228.

their crops inspired a hopeful prospect.

Only by the closest cooperation had the colony been able to survive. It has already been seen (Ch. iv) how provision had been made for housing in the form of a fort and for the enclosing of lands in a common fence. Within the enclosure individuals were given temporary allotments of land for cultivation. Under such circumstances irrigation ditches were hastily constructed to bring the water upon the lands in the most prompt and least laborious manner. With the return of the leaders and the subsequent apportionment of farm lands, arrangements moved forward for more systematic irrigation. With characteristic foresight Brigham Young appeared before the High Council and proposed the construction of a canal to convey water from Big Cottonwood creek along the east side of the Big Field then being surveyed south of the city line. He suggested that the canal would serve as fence on the upper side of the field.(1) It was agreed that the labor of fencing and canal construction should be apportioned to each man according to the amount of land drawn.(2) For watering the garden lots within the city, the responsibility was placed upon the bishops. Under their direction the members of the respective wards cut ditches around each ward and built bridges at the crossings.(3) These early experiments in the Salt Lake valley established the pattern for subsequent practice in all the Mormon colonies. More is said on this point later.

As the most pressing problem confronting the pioneer was the prompt provision of food, it was essential for every colony as it was established

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(1) Journal History, MS., Sept. 30. 1848.
(2) First General Epistle, Millennial Star, Vol. XI, p. 228. The Cottonwood canal proved to be a task of gigantic proportions. It remained unfinished in 1857.
(3) Journal History, MS., April 5, 1849.

to enclose lands most accessible to water and to divert the water in the simplest and easiest manner. Dams were hastily constructed and channels of small dimensions dug--referred to as ditches rather than canals. Later as population grew and more lands were brought under cultivation, the ditches were lengthened and enlarged, or others were made. The result is not in accord with modern irrigation science, which teaches that the most economical way to convey water is by fewer and larger systems. Even though this fact had been fully realized the Mormons could not have done otherwise than they did. They were driven by expediency to which they necessarily sacrificed an ideal economy.

In the construction of ditches and canals the settlers had to use such tools and instruments as were available. Where possible the lines of the ditch were run by surveyors, but to many colonies neither surveyors nor instruments were accessible. Under such conditions frontier ingenuity was drawn upon. Levels were determined by sighting across a pan of water, or by the use of bottles of water attached to a square piece of timber. Sometimes a furrow was run from the stream to be diverted and the fall determined by letting the water run into it, continuing thus to the terminal point of the proposed ditch. When the course had been laid, sections were marked off for each man proportionate to the land to be watered and the ditch was dug, largely by hand. Plows were used where possible and the 'go-devil' occasionally. Thomas describes the 'go-devil' as an implement shaped like the capital A, made of planks five to eight feet long, which was drawn through the plowed ground to push the soil to the sides. When it could be used it saved much hand labor.(1)

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(1) Thomas, George, Development of Institutions under Irrigation, p. 24.

The Church annals are replete with accounts of the difficulties met in constructing and maintaining canals. The earliest ditches in each community gave least trouble, for the reason that land was selected with regard to the water supply. High-line canals running along the mountain side and traversing deep ravines were more costly to build and difficult to maintain. Dams across rapid streams went out in the turbulence of the spring run-off. Earthen banks gave way. There was great loss of water from seepage; in some cases the water never reached the end of the ditch in quantity sufficient to irrigate effectively. Little by little, and by great toil and patience these difficulties were surmounted, or as happened in some instances, the projects were abandoned. Illustrating the heavy burdens of taking out water the following experience on the Virgin river is quoted:

> "Notwithstanding this discouraging beginning (referring to a previous flood that washed away a dam built by Jacob Hamblin) a ditch leading from Virgin River was commenced before the settlers had been located a month, and was carrying water 6 miles by the end of 1862. It had a width of 6 feet and a depth of 3 feet and passed through a timbered tunnel 900 feet long. The work of construction was necessarily so hurried that some of it was not lasting. In the first four years and eight months after St. George was founded $26,611.59 was spent in repairing and replacing dams and sections of ditch, which had thus far watered 420 acres, making a tax of over $63 per acre for water alone. In 1864 the water tax per acre was $10.88; in 1865, $12; in 1866, $9, and in 1867, $9. But for the fact that these taxes were largely paid in labor it would have been impossible for the settlers to meet them. To reduce the burden somewhat, 50 wild-grass lots along the Virgin River, directly south of St. George were sold at auction, netting $4,306, and this sum placed in the fund for completing and enlarging the tunnel." (1)

A report to the Utah Legislature in 1869 furnishes data from which one

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(1) Irrigation Investigations in Utah, U. S. D. A., Office of Experiment Stations, Bulletin No. 124, pp. 210-211.

may gain a fair picture of what had been accomplished in the territory by that time. There had been constructed 215 canals of an aggregate length of nearly a thousand miles and an average length of 4.3 miles. The cost had been about $1700 a mile. These canals irrigated 167,000 acres of land. It was estimated that the private works for the distribution of the water upon the lands had cost nearly or quite as much as the main canals.(1)

It was but natural that water systems should have been constructed, owned, and managed cooperatively. The entire colonial policy of the Mormon people was based on this principle. Early practice in Salt Lake valley set the pattern for later settlements. We have already described the procedure during the season of 1847-48 in the cultivation of the common field. With the allotment of garden lots in the city and of farming lands beyond the city borders, the development of permanent irrigation systems by cooperative groups began. In Salt Lake City the ecclesiastical ward became the unit for the management of irrigation water. It will be recalled that the city was surveyed into ten-acre blocks and that it was subdivided into nineteen ecclesiastical wards of nine blocks each. Omitting streets each ward covered ninety acres, divided among a maximum of seventy-two owners. Under the direction of the bishops residents of each ward constructed the ditches leading the water to all the blocks in the ward. Major undertakings like principal canals and ditches, designed to serve several or all of the wards were directed by the High Council who apportioned the labor to the wards and held the bishops accountable for its being done. In a similar way those owning farm lands outside the city formed convenient groups for taking out water through a common ditch. As settlements were estab-

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(1) Journal History, MS., Feb. 15, 1869.

lished outside the parent colony the same method was followed. Under the direction of the bishops lands were apportioned and irrigation systems built. Water was allotted on the basis of acreage and the acreage taken by an individual determined the amount of work he had to do in the construction of the ditch and in its maintenance. Later settlers earned a share in the ditch by labor performed, or joined others in a new project.

Thus from the beginning ditches and canals were owned by water users. Management was placed in the hands of officers elected by the water users. These in turn chose a water master. The first water master in Utah was Edson Whipple, elected in the fall of 1847 on the motion of Brigham Young.(1) When municipal government was established in Salt Lake City the control of water within the city passed to the city council which in 1853 appointed a city water master and provided for assistants in each ward.(2) These in turn were assisted by deputies, one for each block. The chief functions of the water masters were to see that dams, headgates, canals, and ditches were kept in good order and that water was equitably divided. The mutual canal companies of Utah are still managed in this way. Since 1880 the larger companies have been incorporated and voting is based on shares of stock rather than on membership, but in all other respects the practice is the same as in the unincorporated companies. The general water master is chosen by the board of directors, but each group of water users drawing water from the same weir chose in open meeting one of their number to

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(1) Egan, Howard, Pioneering the West, p. 129.
(2) Journal History, M.S., July 9, 1853.

supervise the division of water running through that weir. Expenses are met by assessments payable in labor or in cash.

It is not surprising that Utah should still be characterized by the large proportion of irrigation projects that are cooperatively controlled. In 1920 seventy-four per cent of all irrigated acreage received water from cooperative companies, twelve per cent from ditches owned by individuals or partnerships, and only five per cent from canals commercially owned. The relatively small capacity of Utah canals reflects the conditions under which they were brought into existence.(1)

It has been said that the Mormon pioneers were merely actuated by the fundamental law of self-preservation in developing their system of water usage.(2) Of Anglo-Saxon origin and familiar with the riparian-rights doctrine prevalent in humid regions, they might have been disposed to accept that doctrine in their new environment. To have done so, would have meant complete defeat of their social and religious objectives. According to the law of riparian rights "each owner of land bordering upon a stream or through which a brook flows is protected against any change in the course or behavior of the stream, except from natural causes; and he in turn is prohibited from bringing about any modification which may affect other landowners below or above."(3) Such a doctrine applied in arid countries would leave them in a desert state. That any individual should have or acquire rights that would conflict with the best interests of the group was repugnant to Mormon philosophy. Man was only a steward, managing his inheritance for the promotion of human brotherhood. The principle of beneficial

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(1) Ch. I, p. 5, above.
(2) Thomas, George, Development of Institutions under Irrigation, p. 45.
(3) Newell, Fredrick Haynes, Irrigation in the United States, p. 289.

use was applied to land and water alike. No man should take more land than he could till nor should he use more water than his reasonable needs required.

Water rights originated in three ways: by legislative grant, by grants of the county courts, and by appropriation. The fundamental doctrines underlying the use of water have been summarized as follows:

> The chief proposition and the one on which all others rest is that the State (Territory) owns and thereby has a right to control the waters within its boundaries, in so far as they are not interstate streams. As subdivisions of this main proposition there are six principal heads: the right to grant a restricted use for power purposes, as in the case of flour and sawmills; the right to limit the amount of water a person or corporation can appropriate; the right to prescribe the territory where the water shall be used; the right to fix the place of usage or the point of diversion, which shall not be changed save by permission of the same power that made the grant; the right to authorize canal companies to sell water; and the right to reject or revise the grant at the pleasure of the granting power where the flow was too great or not sufficient or not needed."(1)

Thomas reviews during the period 1850 to 1867 a dozen such legislative grants made showing that though many of them terminated by non-use, they served to establish the doctrine of public ownership and control. Grants were made by the legislative assembly of the provisional State of Deseret and by that of the territorial government.

In 1852 the territorial legislature passed a law placing control of water in the county court. The text of the law is here given:

> The county court has control of all timber, water privileges, or any water course or creek; to grant mill sites, and exercise such powers as in their judgment shall best preserve the timber and subserve the interest of their settlements in the distribution of water for irrigation or other purposes. All grants or rights held under legislative authority shall not be interfered with. (2)

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(1) Thomas, George, Development of Institutions under Irrigation, p. 46.
(2) Acts, Resolutions and Memorials, p. 46.

Under this authority the county courts granted rights upon application for mill purposes and for irrigation. In Salt Lake county petitions for privileges to use water or other resources had to be advertised in the Deseret News. In other communities, in the absence of a newspaper, notices were posted in conspicuous places or given in Church meetings. Grants for mill purposes often carried a prohibition against interference with rights to the same water for irrigation and for domestic use. Grants of water for irrigation purposes recognized previously established rights. Often grants carried the requirement that the construction of the contemplated works should be supervised by the water master. The court controlled the placement of the dams, dictated the line of canals, required their enlargement for the accommodation of owners of lands taken up after the original construction, supervised the transfer of rights, adjudicated disputes and in general exercised full and complete control of the run of water. There was of course great differences in the care with which the various county courts fulfilled these functions and in the closeness of their supervision. But the results in general were good. The system was brought to an end with the passage of the law of 1880, which modified the powers and placed control in the hands of the county selectmen.(1)

Definition of rights took shape as the normal flow of the stream was completely appropriated. Priority of use was then applied in establishing rights. Ecclesiastical and later civil authority protected an early appropriator against the encroachments of a later one. An early legal recog-

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(1) For more detailed discussion of grants by the legislature and by the county courts, the reader is referred to Thomas, the Development of Institutions under Irrigation, Chs.IV and V, and to Irrigation Investigations in Utah, U.S.D.A., Office of Experiment Stations, Bulletin No. 124.

nition of the principle is found in an act of 1852 regulating the surveying of land. Section six provides:

> "If any surveyor shall survey land or lands for the purpose of cultivation, where to irrigate it would rob other previously cultivated lands of the needful portion of water, such last survey shall be void for cultivating purposes." (1)

In the settlement of disputes over water rights, Mormon practice is of considerable interest. For several decades the common method of settling differences was through the use of ecclesiastical machinery. Within the wards a decision by the bishop was usually final. If greater authority were desired, the stake president was appealed to or one of the general authorities of the Church, an apostle, or a member of the First Presidency. If more formal consideration was advisable the dispute was aired in the bishop's court or before the stake high council. Disputes were common enough and multiplied with the increase of population. In years of scanty rainfall conditions became acute. The following extract, taken from a letter written in a year of water shortage, reveals at once the increasing tension and the common assumption that Mormons could pass through such an emergency with less of difficulty than could non-Mormons. There was more of truth than of bombast in the implication for the reason that the former had long been subject to rigorous Church discipline.

> City creek is distributed to about the finest thread. Gentiles could not possibly live here, for they would kill each other with their hoes, and as it is, Mormons have protracted civil discussions day and night at the head of the water ditches. (2)

A weakness that was insurmountable in settlements effected by the Church was the absence of any power to compel acceptance of the terms of decisions

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(1) Acts Resolutions & Memorials, 1852, p. 96.
(2) George A. Smith, Letter on file in Historian's office.

made. This was at first not serious but as time went on it became clearly evident that finality could only be attained in decrees made and enforced by the civil power. It should be noted, however, that decrees made by the district courts are often based upon and carry into effect the terms of settlements made long before by ecclesiastical tribunals.

It remains to say a word about classified priorities, a feature of irrigation law originating in Utah and not found elsewhere. Water rights are classified as primary and secondary and in some instances rights junior to secondary rights are recognized. Primary water rights are those 'acquired up to the time that the sum of the rights is equal to the ordinary low-water flow of the stream' and are based upon seven years' undisturbed use. Secondary rights entitle holders to withdraw water from the stream whenever the flow is in excess of the quantity required to fulfill the normal requirements of the primary users. Among those holding primary rights there is no distinction of priorities, regardless of the fact that there may be twenty or thirty years difference in the length of the period of beneficial use between earlier and later settlers. This is a reflection of the custom in Mormon colonial policy to reserve as far as practicable for later settlers in a community the same advantages and opportunities as were enjoyed by those who broke the trail and laid the foundations. The result is that in times of water shortage all holders of primary rights have water, though in quantity limited by the degree of the shortage. An absolute priority rule would give to the earliest appropriators the full amount of their customary use and leave the later appropriators without any water whatsoever. The Utah practice is more consistent with the demands of individual and social welfare.

CHAPTER X

A SUMMARY VIEW

We may view the Mormon land system as one aspect of an experiment in central planning. Almost from the inception of the Church direction had been given to its members in their economic as well as in their religious affairs. By the device of assigning 'inheritances' to those who would accept the plan and labor by the requirement of tithes, there was effected a scheme of distribution of surplus income through the hands of the Church authorities to the poor and to the support of enterprises both religious and economic that were considered essential to the progress of the Church as a whole. The plan had the merit of leaving wide latitude for the exercise of individual initiative; within its membership the Church found room for those whose altruism was limited to prayers for the amelioration of the lot of the poor as well as for those who would literally 'cast their all upon the altar.' The conflicts in Missouri and Illinois however, had served to sift out those who were unwilling to prove their faith by the complete sacrifice of worldly possessions if necessary, so that those who followed Brigham Young to the valley of the Great Salt Lake were generally quite ready to accept counsel on mundane as well as on spiritual matters.

The First Presidency assisted by the Twelve constituted a controling body to decide all matters of policy, whether religious, political, or economic. They were governed by certain fairly definite principles that had crystallized out of the flux of past experience. The first of these principles was that they were charged with the responsibility of re-

establishing the kingdom of God among men. They gave a good deal of substance to their conception of the kingdom. It was more than a psychological state, having both geographic center and extent. The center had been fixed by the Prophet in Jackson county, Missouri, where Zion city was to have been built.(1) Now under Brigham Young it was to lie within the valleys of the mountains, at least until strength was achieved to redeem Zion by purchase. This principle of religious responsibility had direct bearing upon the economic system of the Mormons in the incentive it gave for unity of purpose.

The second principle was political. Working within and as part of the Union of states the Church leaders aimed to establish a commonwealth dominated by, if not exclusively made up of, Mormons. Their weakness in their previous attempts had been that of a minority. For a short time both in Missouri and in Illinois they had enjoyed comparative independence--in the former state within the counties of Caldwell and Daviess which had been created for them, and in the latter at Nauvoo, where they were governed almost exclusively by officers of their own choosing; but they had soon been overwhelmed by the rapid increase in numbers of those of different social and religious ideals. Nothing seemed more imperative to the Church leaders as they turned toward the Rocky mountains than that they should have the strength of numbers and the advantages of government of their own making, subject, of course, to the constitution of the United States, which they accepted as an inspired document. This principle of political independence conditioned the economic system of the Church mainly in its influence on the dispersion of its people over an extensive area.

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(1) See above, pp. 7-8.

A third principle was that of equality of opportunity. This followed logically from the conception of divine ownership of all things. But the Church leaders had more practical reasons for adopting the principle as a fundamental rule of action in their economic organization. The earliest settlers in a valley could easily control its future growth by locking up the water courses within the limits of their own pre-emptions, or by taking large individual holdings they could greatly limit the numbers that could acquire a stake in the land. In the application of the principle of equal opportunity there was considerable flexibility, as there must always be in adjusting theory to practice.

A fourth principle was that of cooperation. Communism was never extensively practiced by the Mormon people, though it was taught as an ideal, and some interesting experiments of comparatively short duration were tried.(1) In the initial stages of opening a new settlement cooperative methods were followed in breaking up the land, in fencing, and in constructing the ditch.

A fifth principle was that of self-sufficiency. This was the economic aspect of a broader policy of separatism which had developed from their violent impacts with opposing social groups. Even had they been able to remain within the confines of settled areas, they would have been impelled to limit as far as was economically feasible, their trade with other peoples, and to develop among themselves a widely diversified industrial and commercial system. To such a policy they were now almost irrevocably committed by rigid geographic circumstances.

Though we have not been concerned with the development of manufactures

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(1) See Chap. ii.

among the Mormons, it should be noted that the objective of self-sufficiency required for its realisation the development of industry as a supplement to the basic agricultural economy. Settlers skilled in the trades were encouraged to develop them and were given smaller allotments of land than were the farmers. Industrial experiments were not always successful. The most urgent manufacturing processes, the milling of wheat and lumber, had been provided for in the earliest colonies. The comparatively simple machinery for such could be supplied with small capital, and the increase of grist and saw mills paralleled the growth of numbers and increase of settlements. In Salt Lake City the authorities established on the Temple square an assortment of shops known as the Public Works, where mechanics were employed in such activities as the working of metal and wood, the tanning of leather, and the manufacture of pottery. In the manufacture of woollens success was marked from the first, both in household and in factory production; though the quality was not equal to the finer grades from the States. However, the President set the fashion in wearing homespun, and the industry received general support. It has persisted to the present day. Rag paper was also made successfully and the industry survived until 1893, when the paper mill was destroyed by fire. Owing to the cheapness of wood-pulp paper no effort was made to rebuild the mill. Costly attempts were made to meet other needs that had better--viewing the matter with the wisdom of hindsight--been satisfied by importations. A fruitless attempt to produce beet sugar with machinery imported from France and drawn by ox teams a thousand miles resulted in the loss of thousands of dollars of capital raised in England. (1)

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(1) Forty years later the Church took an active part in the establishment of the first successful beet-sugar factory in Utah.

There was also an epic struggle to produce iron. We have referred above to the discovery of coal and iron in proximity and to the founding of Cedar City as an industrial community.(1) All experienced iron workers, of whom there were a number among the English converts, were 'called' to make permanent homes at Cedar City and one apostle spurred on the mechanics while another raised capital among the Church members in England. Eventually a small amount of iron was produced and a few castings made. It was another mechanical, but not an economic, triumph. Meanwhile certain unforseen events occurred that made these manufactures less urgent. For one thing, competition in freighting and trading soon developed and brought down the cost of transportation and of sale. Again the rush to California after the discovery of gold developed a considerable trade among the Mormon settlements that had been quite unexpected. Food prices soared and the Saints were able to make very profitable exchange of their products for such things as the eager prospectors carried in relative excess. The dispatch of Johnston's army to Utah turned out greatly to the economic, if not to the moral, advantage of the Mormons. The immense government supplies were dumped on the market when the army was recalled. It is said that stocks of goods purchased at a cost of about four million dollars were sold for $100,000. Many a farm implement was fashioned from the supply of scrap iron from this source. The outbreak of the Civil War increased the inducements to develop the cotton industry in the extreme southwestern part of Utah where climate and soil appeared favorable both for cotton and silk culture. Accordingly the settlement of St. George was founded, and though it became a thriving agricultural community its principal objectives were never commercially realized. By the

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(1) See above, p. 63.

end of the second decade the completion of the transcontinental railroad removed whatever natural protection the Mormon industries had enjoyed. We may sum up this phase of Mormon experience by saying that success was achieved in the handicrafts and such industries as the milling of lumber and flour, in which neither large capital nor familiarity with intricate technological processes was essential; but that failure resulted from the attempts to produce iron and sugar commercially because of unforseen technological difficulties and the unexpected competition of eastern products.

The land policy of the Church was developed primarily to realize its religious aims to which, as we have pointed out, were subordinated social, political, and economic objectives. In its desire to convert the world the Church did not differ from any one of a thousand religious bodies, but in its purpose of gatherings its people it was different from most. The leaders envisaged a numerous and rapidly increasing population. The enclosing of more lands than an individual could use would have been inconsistent even if arable lands had been in generous supply. Under the actual conditions in the arid belt, it would operate to limit the growth of the Church and hence to defeat its mission.

The same motives that led to restraint of the individual in regard to size of holdings prompted the Church leaders to seek to establish wide territorial limits for their 'kingdom', even at the expense of a more economic development. Four considerations doubtless contributed to the establishment of colonies far removed from the center. In the first place, irrigable land was to be found only in patches and numerous valleys must be possessed to supply an adequate area for the colonization of thousands of immigrants. Secondly, ample political boundaries for the state of Deseret, which the Mormons hoped would soon be admitted to the Union, would serve as a barrier

to the encroachment of unfriendly elements. In the third place, outposts were desirable on the principal routes into and out of Salt Lake, to keep open channels of communication and especially to assist immigration. Finally, the development of a self-sufficient economy required industrial settlements in the vicinity of the iron resources of southern Utah. From the point of view of economic development a more deliberate growth from the parent colony outward would have incurred fewer mistakes and less hardship. Nothing was gained by the colonization of San Bernardino and Carson valley, and there were great individual sacrifices. The long jump to the little Salt Lake valley in 1851 was justified by the hope to produce iron. That settlement decided upon, it was imperative to establish others at intervals of a day's journey to maintain lines of communication and afford mutual protection. Thus it came about that more fertile and more accessible lands nearer the parent colony were settled subsequently to these more remote sections.

Though displaying a notable degree of practicable wisdom in the selection of areas for settlement, the Mormons were not invariably successful. A summary of project failures made by a one-time historian of the Church estimates that losses equivalent to three million dollars in labor-time resulted from attempts to establish colonies that were soon abandoned.(1) In some instances the abandonment was temporary, as in the case of successful opposition of neighboring Indian tribes, but examples of unfortunate selection due to inability to recognize in advance the extent of adverse natural con-

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(1) Smythe, Conquest of Arid America, pp. 68-69.

ditions are not wanting.[1] In the light of more recent mistakes in land settlement projects for which accumulated experience and scientific aids were available, the Mormons seem to have done very well indeed.

In opening up new areas to settlement the Church did not wait for volunteer action or send only those who were seeking a stake in the land. Rather it selected the nucleus group of families with regard to leadership, agricultural experience, and diversification of occupations. Many who were thus called had already made farms and built homes, which had to be sold often at a sacrifice. While some of these gained economically through the larger opportunities that they found, others suffered genuine losses, so that after toiling through the pioneering phase of settlement a second time, they had fewer possessions than before. Even so there were few complaints, since those who responded to the call were satisfied that their own hardships and deprivations would result in compensating social benefits. And in the long run they were probably correct.

We have suggested above that the policy of dividing the lands into very small holdings rested in part upon the anticipated need of making a limited area support great numbers. It was more immediately essential to sustain the heavy annual immigration by the production of a food surplus. Until bread could be supplied in excess, immigration would be limited to

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(1) Thus the people of Fort Harmony left improvements that had cost $40,000 because of difficulty of getting water during the winter season. (Deseret News, Aug. 22, 1860.) Inability to control the waters of the Little Colorado, which washed out dam after dam, led to the abandonment of Sunset, Brigham City, and Obed. (History of Snowflake Stake, MS.) The communities established in the Nevada Point, although abandoned in 1871, ostensibly because of their separation from Utah by Congressional action, were already overwhelmed with adversity. The heavy burden of feeding the Indians as the price of peace, water scarcity, and remoteness from other communities had disheartened the settlers almost to the point of abandonment; their inclusion within the jurisdiction of Nevada was the last straw. (McClintock, T. H., Mormon Settlement in Arizona, pp. 120-22.)

those who could afford to transport across the plains a year's supply. On the contrary the release of immigrants from this requirement would not only permit many of limited means to undertake the journey, but it would make it possible fot others to include in their packs goods not yet produced in the settlements. Brigham Young was ambitious to double the population annually and fixed his agricultural policy accordingly. Clearing of land is not much of a problem where trees and rocks are absent and much more acreage could have been worked had it not been for the necessity of irrigating and enclosing the crop lands. To have attempted to enclose forty acres or more for every family would have been fatal to the plans of the Church. The increase in the labor of making fence and ditch would have seriously impeded the orderly progress of settlement, and in many localities would have made it impossible. Accordingly the standard of full utilization was strictly adhered to. Though land was offered as a free good a man was prohibited from taking more than he could fence, plow, plant, and irrigate. The community need of the greatest possible surplus of food, though doubtless in conflict with the long-run economic advantage of the individual, was paramount. It has since become evident that holdings are much too small for economic utilization under present conditions, but under the circumstances facing the pioneers the plan was wisely adjusted to the need.

The principle of equal opportunity operated to prevent speculation in land. This was another reason for limiting holdings to the amount of acreage that would be fully utilized. The late comer to a settlement was to have a fair chance at getting good land. As long as the supply of land held out it was available to new settlers on equal terms with original

settlers. In the earlier years of settlement there was an attempt to enforce the rule that sale price was to cover only the cost of improvements. This, of course, was impossible of enforcement and was soon abandoned. Brigham Young himself profited heavily from 'unearned increments.' Occasionally efforts were made to effect a rough equality between mechanics and farmers by giving the latter larger holdings. Brigham Young advised the mechanics in Salt Lake City to be satisfied with their city lots of one and a quarter acres, and at Cedar City the iron workers were apportioned garden lots only. This rule was not strictly adhered to. It can readily be seen that where specialization of occupations is not well defined there would be great difficulties. The instances noted are useful to illustrate the spirit of fair-play that underlay the Mormon system of land distribution.

Though the practice in the utilization of water is open to criticism judged by present standards, it was consistent with the general scheme of which it was so vital a part. A series of parallel ditches of small capacity each of them relatively short is much less economical both of labor and of water than a scientifically integrated system utilizing the same supply. There were of course no rules or previous experience for the Mormons to follow. They were originators in irrigation practice and had to learn empirically. As in the case of land the guiding principle was complete utilization. A man gained a right to use water by putting it to beneficial use. Failure to use terminated the right.

We have seen that timber and grazing lands were regarded as common. The special privilege grants of the former to Church leaders who built roads and exercised a salutary control over the taking out of wood seem to be consistent with the general policy of economic utilization even though

on first consideration the contrary might appear to be the case. Less can be said for the special grants of pasture lands, as there is no discoverable advantage to the community in the arrangement, and the practice was a violation of the principle of equal opportunity that had elsewhere applied. The Church encouraged the mining for coal, iron, and lead; but denounced in the most vigorous terms those who would have searched for the precious metals. The purpose and effect of its attitude was to hold its people on the farms against the lure of placer gold in California; and to implant a lasting prejudice against prospecting for gold and silver in Utah. In the light of the general policy, this attitude was consistent. Early discovery of gold and silver in quantity would have brought to Utah a horde of strangers and would have placed in jeopardy the realization of the primary objectives of the Church.

Looking at the Mormon land system as a whole in the light of religious and social ends which it was designed to promote and the geographic field within which it had to operate, one concludes that it was well conceived and well worked out. The mistakes made were few and relatively insignificant in comparison with the scores of successful colonies that were established and that formed the centers of growth for several decades. A rapid immigration of relatively poor people, many in fact being absolutely without capital and often as not without farming experience, was controlled and directed so that practically all became established as land holders. The hardships of pioneering were minimized and life made happier by the provision of experienced and sympathetic leadership, by general cooperation in major tasks, and by close settlement. Speculative tendencies were held in restraint and those first on the ground were given no great advantage over subsequent settlers. The goal of general prosperity was fairly well achieved.

That the system of small holdings is found uneconomic under present-day conditions is in no sense an indication of lack of foresight on the part of those who conceived it.

Two general comments on the land system of the Church are suggested by a very early and a very recent development in the history of land utilization in America. An interesting parallelism is observed in the settlement of New England and of Utah. In both instances the early settlers were impelled by religious and political motives to seek isolation. Both peoples from very similar social and environmental considerations built compact villages, farmed for a time in common, and finally apportioned the plow land in comparatively small parcels, while continuing to hold the pasture lands in common. In distributing the plow land in New England the division was left to the wisdom of committees of their leading men or determined by lot.(1) Differences are noted in the longer time during which the common remained undivided in New England--two or three decades--and in the size of holdings. The town lots in New England, that is, holdings within the village, varied from two or three acres to twenty or twenty-five and the holdings of plow lands varied in size from fifty to several hundred acres. Among the Mormons of course the holdings both of village and of farm lands were much smaller and more nearly equal. Similarity of the Mormon and the New England land systems has led to the suggestion that the former is merely a transplantation of the New England system. This idea gains support from the fact that Mormon leaders were of New England stock. The writer cannot find any evidence of the projection of the early New England land system into the West and adheres to the view that it de-

(1) Eggleston, Melville, Land System of the New England Colonies, Johns Hopkins University Studies, 1886, p. 43.

veloped independently.

The other comment is with reference to the influence of the Mormon system on subsequent settlement of arid lands. There is a direct line of development from the pioneer activities of the Mormons to the reclamation policy of the federal government. An intervening step is found in the development of irrigation projects in Colorado where the Mormon system was adopted by the founders of the Union Colony at Greeley. The typical farm-village layout and the closely cemented community grouping of the settlers identify the Colorado settlement as an adaptation of the system previously worked out in Utah. The only element lacking was the bond of common religious belief; but a closely parallel requirement is found in the selection of settlers of good character. The early Union Colony is described as "highly moral, loyally religious, but far from austere..... The manufacture and sale of intoxicating liquors was absolutely forbidden .....The attempt to introduce a billiard hall was frustrated. On the other hand the dramatic association prospered and dancing was not excluded from Greeley." The land was acquired by purchase from agents of the Denver Pacific Railway, and from private holders. Adjoining public lands were entered by pre-emption filings to prevent uncongenial neighbors. Settlers were recruited in the East during the winter of 1869-70 and if otherwise acceptable were admitted to membership upon payment of $5.00 as entrance fee and $150.00 for the land fund. For this investment the settler was given the right to select a parcel of farm land and an option to purchase a city lot at from $25 to $50. Comparative equality of rights was achieved by the variation in the price of city lots and in the size of farm lots according to distance from the town-site.(1)

(1) Willard, James F., The Union Colony at Greeley, Colorado. Introduction, passim. The similarity of these arrangements with those of the Mormons in the settlement of Salt Lake City will be recalled. See above, p. 47-48.

In the layout of the town, four-square with the cardinal points of the compass, the wide streets, and the reservation of lands for churches, schools, and parks, the Greeley plan and the Mormon plan are identical.

The Mormon influence on the founders of Greeley is not a matter of supposition. The suggestion for the project came from the agricultural editor of the New York Times, Nathan C. Meeker, after a visit to the West in 1869, and immediately won the support of his chief Horace Greeley, who had written appreciatively of the agricultural achievements of the Mormons, whom he had visited in 1859.(1) Before he had selected a location for his settlement, Meeker interested a number of prospective colonists. Early in 1870, accompanied by two associates, he went West again to select and purchase land. He made a special trip to Salt Lake City to confer with Mormon leaders and to study their land system and methods of irrigation.(2) Upon his return to Colorado the site of Greeley was determined and the lands settled as already described.

Greeley in turn became the model for three other Colorado colonies established in 1870 at Evans, Longmont, and Green City. In all of these the farm-village type of settlement was adopted, the farmers residing on lots within the town-site and cultivating their respective holdings of farm lands outside the village.(3)

The spread of the system to other states need not be traced. State and federal reclamation programs succeeded settlement by private undertaking when the increasing costs of water storage and irrigation systems made the cooperation of government imperative. The costly mistakes made have awakened us to a realization that the actual settlement of land is a more

(1) Greeley, Recollections of a Busy Life, p. 373.
(2) The Daily Colorado Tribune, Feb. 20, 1870; The Deseret Evening News, Feb. 28, 1870.
(3) Willard, James F., The Union Colony at Greeley, Colorado. Introduction.

complicated process than at first appeared. Emphasis is now placed upon the economic and social rather than upon the physical aspects of the problem of reclamation. It is insisted that settlers must be selected with regard to their capital and experience, provision must be made for an ample community life, and there must be direction over a long period of years. These fundamental principles the Mormons discovered and put into practice four-score years ago.

APPENDIX I

DEED OF CONSECRATION AND LEASE USED IN SETTING UP THE UNITED ORDER

"Be it known, that I, Titus Billings of Jackson County, and the State of Missouri, having become a member of the Church of Christ, organized according to law, and established by the revelations of the Lord, on the 6th day of April, 1830, do, of my own free will and accord, having first paid my just debts, grant and hereby give unto Edward Partridge of Jackson County, and State of Missouri, Bishop of said church, the following described property, viz: - Sundry articles of furniture, valued at fifty-five dollars and twenty-seven cents; also, two beds, bedding and extra clothing, valued seventy-three dollars twenty-five cents; also farming utensils valued forty-one dollars; also one horse, two wagons, two cows, and two calves, valued one hundred forty-seven dollars.

"For the purpose of purchasing lands in Jackson County, Mo., and building up the New Jerusalem, even Zion, and for relieving the wants of the poor and needy. For which I, the said Titus Billings, do covenant and bind myself and my heirs forever, to release, all my right and interest to the above described property, unto him, the said Edward Partridge, Bishop of said church.

"And I, the said Edward Partridge, Bishop of said church, having received the above described property, of said Titus Billings, do bind myself, that I will cause the same to be expended for the above mentioned purpose of the said Titus Billings to the satisfaction of said church; and in case I should be removed from the office of Bishop of said church by death or otherwise, I hereby bind myself and my heirs forever, to make over to my successor in office, for the benefit of said church, all the above described property, which may then be in my possession.

"In testimony whereof, we have hereunto set our hands and seals----------day of----------in the year of our Lord, one thousand, eight hundred and thirty-----.

"In presence of (----------
(---------- (Edward Partridge
(Titus Billings

"Be it known that I, Edward Partridge, of Jackson County, State of Missouri, Bishop of the Church of Christ, organized according to law and established by the revelations of the Lord, on the 6th day of April, 1830, have leased, and by these presents do lease unto Titus Billings, of Jackson County, and State of Missouri, a member of said

church, the following described pieces or parcels of land, being a part of section No. three, township No. forty-nine, range No. thirty-two, situated in Jackson County, and State of Missouri, and is bounded as follows, viz: Beginning eighty rods E. from the S.W. corner of said section; thence N. one hundred sixty rods; thence E. twenty-seven rods twenty-five links; thence S. one hundred sixty rods; thence W. twenty-seven rods twenty-five links to the place of beginning, containing twenty-seven and one-half acres, be the same more or less subject to roads and highways. And also have loaned the following described property, viz: Sundry articles of furniture, valued fifty-five dollars twenty-five cents; also two beds, bedding and clothing, valued seventy-three dollars twenty-seven cents; also sundry farming utensils, valued forty-one dollars; also one horse, two cows, two calves, and two wagons, valued one hundred forty-seven dollars to have and to hold the above described property, by him, the said Titus Billings, to be used and occupied as to him shall seem meet and proper.

"And as a consideration for the use of the above described property, I, the said Titus Billings, do bind myself to pay the taxes, and also to pay yearly unto the said Edward Partridge, Bishop of said church or his successor in office, for the benefit of said church, all that I shall make or accumulate more than is needful for the support and comfort of myself and family. And it is agreed by the parties, that this lease and loan shall be binding during the life of said Titus Billings unless he transgresses, and is not deemed worthy by the authority of the church according to its laws, to belong to the church. And in that case, I, the said Titus Billings, do acknowledge that I forfeit all claim to the above described leased and loaned property, and hereby bind myself to give back the lease and also pay an equivalent for the loaned (articles) for the benefit of said church, unto the said Edward Partridge, Bishop of said church or his successor in office. And further, in case of said Titus Billings' or family's inability in consequence of infirmity or old age, to provide for themselves while members of this church, I, so bind myself to administer to their necessities out of any funds in my hands appropriated for that purpose, not otherwise disposed of, to the satisfaction of the church. And further, in case of the death of said Titus Billings, his wife or widow, being at the time a member to said church, has claim upon the above described lease and loaned property, upon precisely the same conditions that her said husband had them, as above described; and the children of said Titus Billings in case of the death of both their parents, also have claim upon the above described property for their support, until they shall become of age, and no longer; subject to the same conditions yearly that

their parents were; provided, however, should the parents not be members of said church and in possession of the above described property at the time of their death, the claim of the children as above described, is null and void.

"In testimony whereof, we have hereunto set our hands and seals this----------day of----------in the year of our Lord, one thousand eight hundred and thirty----------.

"In presence of

(----------
(----------
(----------

Signed

(Edward Partridge
(Titus Billings" (1)

(1) Smith, Joseph, History of the Church, (ed. by Roberts, B.H.) Vol. I, pp. 365-67.

APPENDIX II

STATISTICS OF POPULATION

A. Population data for 1847.

The number of people who spent the winter in Salt Lake valley in 1847-48 was just a few less than seventeen hundred. In some of the early correspondence the figure 3000 is used, (The High Council to the Hudson Bay Company, Journal History, December 7, 1847). But under date of March 6, 1848, the Mormon leaders in the valley writing to Brigham Young at Winter Quarters state the population of the city to be 1671, (Journal History, March 6, 1848). This checks very closely with the result obtained by an attempt to tabulate arrivals and departures during the period.

The arrivals for 1847 as nearly as the writer can determine were as follows:

1. Original band of pioneers. 148

2. Mississippi Saints. This group left for the West in 1846 and wintered at Pueblo. Seventeen of them joined the Pioneers at Fort Laramie (Journal History, June 1, 1847) and the others of the group reached the Salt Lake valley July 29. Woodruff in his journal says there were about one hundred of them. Thomas Bullock gives the number as forty-seven (Smith, Essentials in Church History, p. 461.) 47

3. Pueblo detachment of the Mormon Battalion, eighty-five men and eighteen women in Brown's command, and fifty-three men under Willis (Journal History, MS., July 29, 1847). 156

4. September-October arrivals, consisting of emigrants who left the Elkhorn river about July 4. A roster of names is given in Journal History, July 21, 1847. 1481

5. Battalion members from California. These arrived in groups during October; the number is not known to the writer. In Essentials of Church History, p. 461, the total of the Battalion arriving in 1847 is given at 210. Deducting the Pueblo group of 156, we get 54, which seems too small a figure. At one time 350 were expected (Millennial Star, 10:42) but Captain Brown had been sent out to meet them and turn all back who lacked provisions, with advice to remain in California over the winter (Journal History, MS., October 16, 1847). I have taken 100 arbitrarily. 100

Total Arrivals 1932

The departures of record were 251.

1. Shadrach Roundey's group left for Winter Quarters, August 16-17 (Journal History, MS. same dates). 71

2. A larger body of Pioneers led by Brigham Young left for Winter Quarters, August 26. (Journal History, MS., August 30, 1847). 108

3. Philemon C. Merrill and others of the Battalion left to join their families at Winter Quarters, October 15, 1847 (Journal History, MS., same date).

4. Another body of Battalion boys left for the East, October 18, (Journal History, MS., October 18, 1847). 16

5. Lathrop-Rockwell Company, sent to California for Cattle and seeds. (Journal History, MS., November 18, 1847). 32

6. Five Battalion boys left for the East, early in 1848 (Journal History, MS., March 6,1848). These may be the 'three messengers' referred to by Wilford Woodruff, who reports that number as leaving the middle of January with mail for the Saints in Winter Quarters. (Millennial Star, 10:137). 5

251

The difference between arrivals and departures as thus given is 1681. Despite probable errors, and possible emissions, the figures establish the approximate population for the first year of Utah history. Moreover, they show more travel in and out than one might at first suppose.

B. Population data for 1848.

On the ninth of August, 1848, the presiding authorities in Salt Lake valley wrote to Brigham Young on the plains, stating that the population was not far from 1800. This was before the emigrant trains began to arrive. During the winter there had been about fifteen deaths, and over one hundred births, (Bullock, Thos., Millennial Star, 10:314-15.) We may be safe in concluding the population in the late summer of 1848 to be at least 1750. The Mormon emigration left Winter Quarters in June and July and reached the valley between September 20 and October 19. The numbers are:

1.	Brigham Young's Company (Jenson's Chronology)	1229
2.	Heber C. Kimball's Company (Bullock, Thos., Millennial Star, 10:314)	662
3.	Willard Richards-Amasa Lyman Company (Journal History, July 9, 1848)	526
		2417

Thirty-seven members of the Mormon Battalion reached the valley October 1, 1848 from California. (Jenson's Church Chronology, p. 36) The minimum population for the close of the year 1848 may, therefore, be placed at 4200. The distribution of houses as given on the authority of the bishops in April, 1849, showed 435 in Salt Lake City, 47 in North Mill Creek, and 53 in South Cottonwood, (Journal History, MS., April 30, May 1)

C. Census Data

Table I

Total population of Utah with rates of increase. (1)

Year	Total	Increase	Per Cent of Increase in State
1851	11,380		
1860	40,273	28,893	253.89
1870	86,786	46,513	115.49
1880	143,963	57,177	65.88
1890	207,905	63,942	44.42

Table II

Showing ratio of increase of certain states and of the Western Division of the United States. (2)

Year	United States Per Cent	Western Division Per Cent	Utah Per Cent	Oregon Per Cent	California Per Cent
1850 to 1860	35.58	246.15	253.89	294.65	310.37
1860 to 1870	22.63	60.02	115.49	73.30	47.44
1870 to 1880	30.08	78.46	65.88	92.22	54.34
1880 to 1890	24.86	71.27	44.42	79.53	39.72

Table III

Percentage of foreign born in the United States and certain subdivisions. (3)

Year	United States	Western Division	Utah	California
1850	9.68	15.11	17.96	23.55
1860	13.16	28.92	31.67	38.56
1870	14.44	31.64	35.38	37.45
1880	13.32	28.29	30.56	33.87
1890	14.77	25.46	25.52	30.52

(1) Compendium of the Eleventh Census, Pt. 1, Table 1a and Table 1b.
(2) Ibid, Table 16.
(3) Ibid., Pt. 1, lxxix.

Table IV

Showing place of birth of the foreign-born population of Utah.

	(1) 1850		(2) 1860		(3) 1870		(4) 1880	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Total foreign-born	1990	100.	12,754		30,702		48,994	100.
England	1056	53.07	7,084	55.54	16,070	52.34	19,654	40.12
Scotland	232	11.66	1,228	9.63	2,391	7.79	3,201	6.53
Wales	125	6.28	945	7.41	1,783	5.81	2,390	4.88
Ireland	106	5.33	278	2.18	502	1.64	1,321	2.70
British America	338	16.98	647	5.07	687	2.24	1,036	2.11
Denmark	2	.10	1,824	14.30	4,952	16.15	7,791	15.90
Sweden	1	.05	196	1.54	1,790	5.83	3,750	7.65
Norway	32	1.60	159	1.25	613	2.	1,214	2.48
Switzerland	1	.05	78	.61	509	1.66	1,040	2.12
Germany	50	2.51	158	1.24	358	1.17	885	1.81
China	1	.05	1	.01	416	1.45	502	1.02

Table V

Showing by geographic divisions the place of birth of the native population of Utah.

	(5) 1850		(6) 1860		(7) 1870		(8) 1880	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Total Native	9,355		27,490		56,084		98,958	100.
Born in Utah	1,381		15,968		41,211		81,716	37.014
Born outside Utah								6.16
	7,974	100.	11,522	100.	14,873	100.	17,242	100.
North Atlantic	3,149	39.503	4,320	36.005	5,355	36.005	6,492	37.014
South Atlantic	305	3.82	455	5.37	800	5.37	1,063	6.16
North Central	3,678	46.02	5,485	45.02	6,696	45.02	7,614	44.16
South Central	752	9.43	973	7.53	1,120	7.53	1,305	7.57
Western Division								

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(1) Seventh Census. Report of the Superintendent for Dec. 1, 1852, pp.18-19.
(2) Eighth Census. Population 578.
(3) Ninth Census. Population and Social Statistics. Table VI, pp. 336-42.
(4) Tenth Census. Statistics of Population, Table XIII, pp. 492-95.
(5) Seventh Census. Report of Superintendent for Dec. 1, 1852, pp. 16-17.
(6) Eighth Census. Population, p. 578.
(7) Ninth Census. Population and Social Statistics. Table VI. pp. 328-35.
(8) Tenth Census. Statistics of Population, Table X, pp. 480-83.

Table VI

Showing number of females to each 100 males. (1)

	United States	Western Division	Utah
1850	95.9	36.7	88.2
1860	94.7	50.5	98.8
1870	97.8	62.6	96.7
1880	96.5	65.2	93.2
1890	95.3	69.8	88.2

Table VII

Showing absolute increases of males and females in Utah. (2)

	Increase of Females	Increase of Males
1850 to 1860	14,684	14,209
1860 to 1870	22,647	23,866
1870 to 1880	26,789	30,388
1880 to 1890	27,988	35,954

Table VIII

Showing the number of children per 100,000 of population at various ages for 1850, 1860, and 1870.

States	(3) 1850			(4) 1860			(5) 1870		
	Under 5	5 and under 10	10 and under 15	Under 5	5 and under 10	10 and under 15	Under 5	5 and under 10	10 and under 15
Calif.	2,066	3,281	2,281	11,326	6,736	4,758	12,187	10,982	9,243
Colo.				1,183	920	891	13,759	10,109	8,417
Nevada				5,431	2,613	1,629	7,759	5,976	4,452
N. M.	14,299	14,184	11,421	18,065	14,677	11,506	14,500	13,157	12,469
Ore.	15,641	14,067	10,765	18,807	13,941	10,024	15,186	13,671	12,284
Wash.				15,676	8,017	5,853	15,066	12,573	9,539
Utah	19,117	12,039	12,074	23,765	14,958	10,923	19,238	15,642	13,389
U.S.	14,813	13,829	12,285	15,274	13,087	11,551	14,302	12,487	12,413

(1) Compendium of the Eleventh Census
(2) Ibid., p. lxxxiv.
(3) Seventh Census, Table 30, pp. 52-53
(4) Eighth Census, pp. 592-93
(5) Ninth Census, Vital Statistics, pp. 562-63.

APPENDIX III

FARM ACREAGE

Table I

Showing average acreage per farm in Utah and in the United States from 1850 to 1910. (1)

	Average acreage per farm in Utah		Average acreage per farm in United States	
	All Land	Improved land	All land	Improved land
1910	156.7	63.1	139.1	75.2
1900	212.4	53.2	146.2	76.2
1890	125.9	52.1	136.5	78.3
1880	69.4	44.0	133.7	71.0
1870	30.2	24.2	153.3	71.0
1860	24.7	21.2	199.2	79.8
1850	50.6	17.6	202.6	78.0

Table II

Showing average acreage of irrigated farms in 1889, with related data. (2)

States and Territories	No. of Irrigators in 1889.	Areas irrigated in 1889, in acres.	Average size of irrigated farms, in acres 1889.	Average value of products per acre, 1889.
Total	52,584	3,564,416	68	14.89
Arizona	1,075	65,821	61	13.92
California	13,732	1,004,233	73	19.00
Colorado	9,659	890,735	92	13.12
Idaho	4,323	217,005	50	12.93
Montana	3,706	350,582	95	12.96
Nevada	1,167	224,403	192	12.92
New Mexico	3,085	91,745	30	12.80
Oregon	3,150	177,944	56	13.90
Utah	9,724	263,473	27	18.03
Washington	1,046	48,799	47	17.09
Wyoming	1,917	299,676	119	8.25

(1) Compiled from U.S. Census 1910, Vol. V, pp. 91,96.

(2) Report on Agriculture by Irrigation, Eleventh Census, 1890, p. 7. From a table on page 6 of the same report we find that in all states, arid and subhumid, an irrigated acreage aggregating 1,828,776 acres, is farmed by 49,541 irrigators in parcels of 37 acres in average size, and an almost equal acreage, 1,802,605 acres, is farmed by 4,595 irrigators in parcels of 392 acres average. In Utah, nine-tenths (90.19 per cent) of the irrigated acreage is farmed in areas of 25 acres on the average.

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History of Brigham Young. L. D. S. Church Historian's office, Salt Lake City. This record covers the period of Brigham Young's presidency of the Church, 1844-1877. It was written in journal form by clerks directed by Young himself. It is the most important source of information for the period covered.

Iowa Settlements. L. D. S. Church Historian's office. Salt Lake City. A manuscript volume dealing with the Mormon settlements in Iowa.

Journal History. L. D. S. Church Historian's office, Salt Lake City. This is a compilation of an immense amount of material covering the entire range of Church history from 1830 to date, arranged in chronological form. Into this record has been copied almost the whole of the Documentary History of the Church, The History of Brigham Young, and innumerable extracts from private letters, journals, and other source materials.

Stake and Ward Histories. L. D. S. Church Historian's office, Salt Lake City. Every ecclesiastical district of the Church is required to keep records. From original minute books, from private journals, and from interviews with early settlers, Assistant Church Historian Andrew Jenson has prepared about five hundred stake and ward histories. These records constitute an important source of information on Mormon settlements.

P. E. F. Record Book, MS. Church Historian's office.

Utah Sketches. Bancroft Library. Berkeley, California. A collection of sketches prepared for Hubert Howe Bancroft by men and women prominent in early Utah history.

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B. NEWSPAPERS AND MAGAZINES

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Economic Geography. Quarterly published by Clark University. The July, 1925 number (Vol. I, No. 2) contains an interesting study by Langdon White, entitled "The Insular Integrity of the Salt Lake Oasis."

Frontier Guardian. 1852. Published under the auspices of the Mormon Church at Kanesville (Council Bluffs) Iowa. Edited by Orson Hyde, an apostle of the Church.

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C. CONTEMPORARY SOURCES

Acts, Resolutions, and Memorials, First Annual and Special Sessions of the Legislative Assembly, Territory of Utah, Salt Lake City, 1852.

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Brown, James S., Life of a Pioneer. Salt Lake City, 1900.

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